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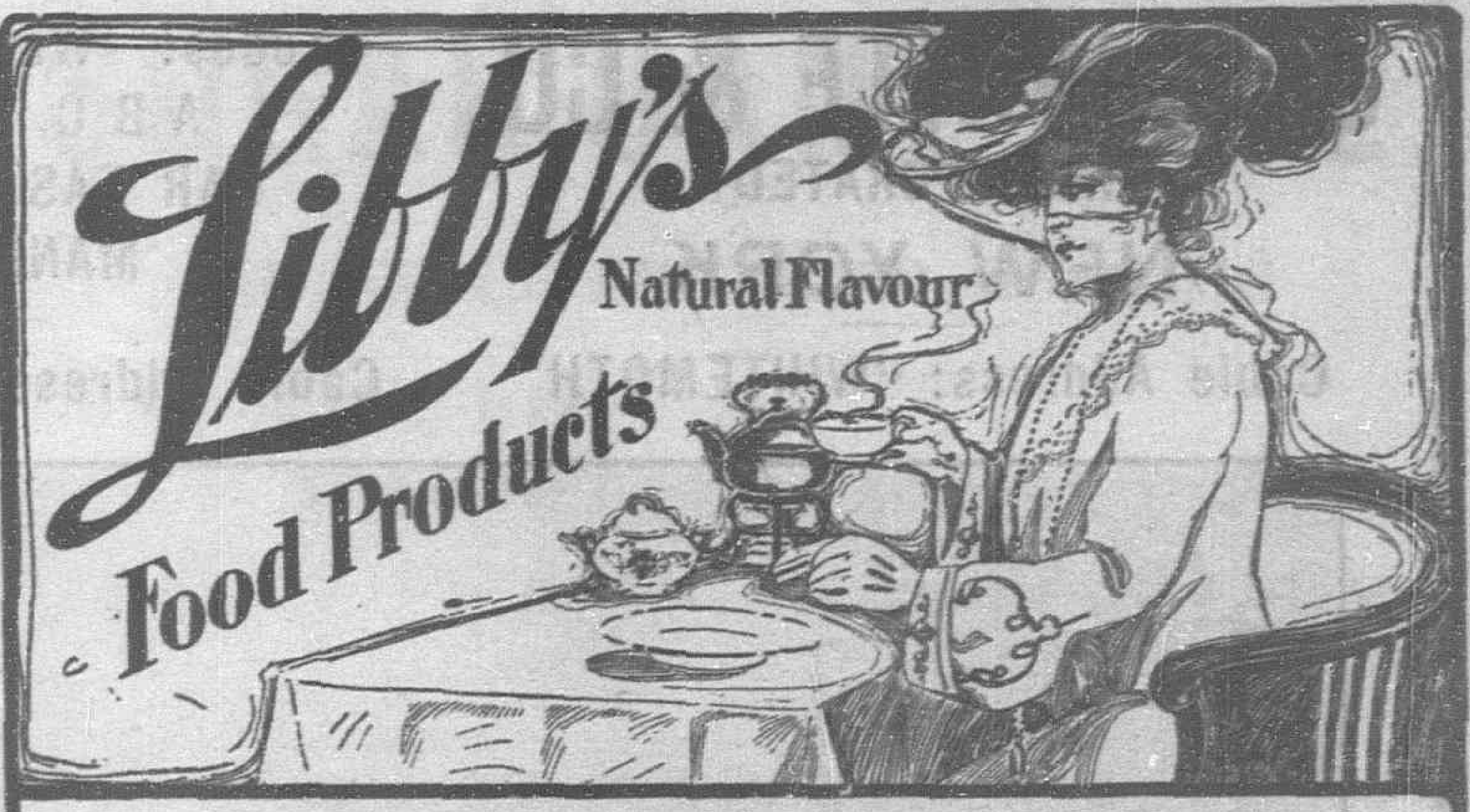

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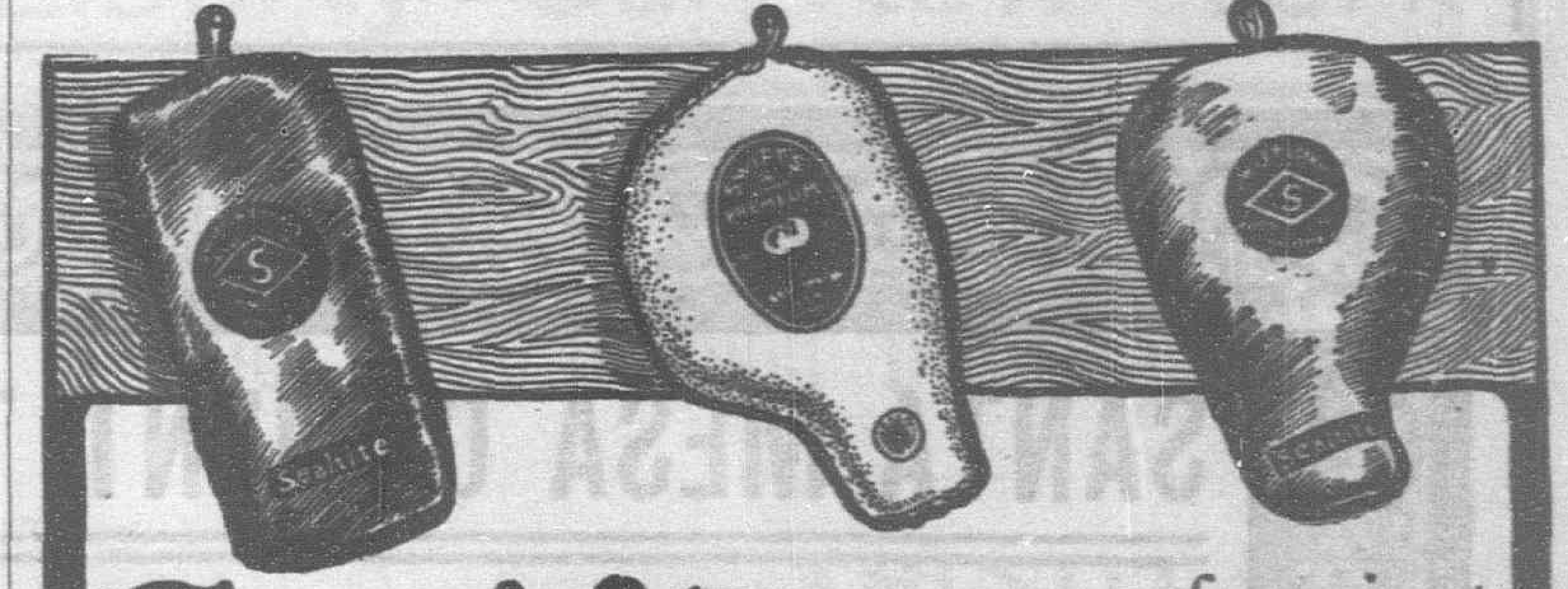

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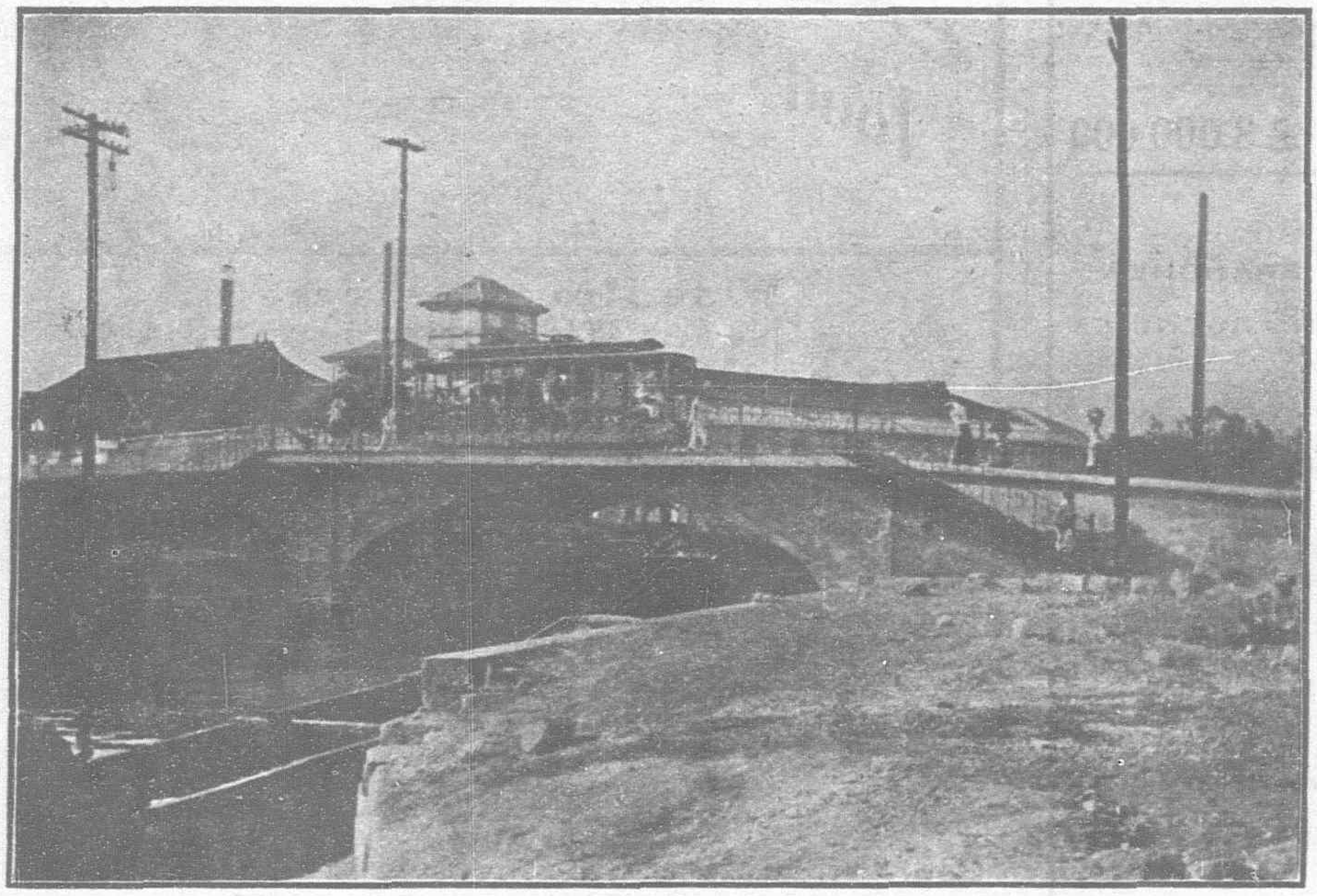

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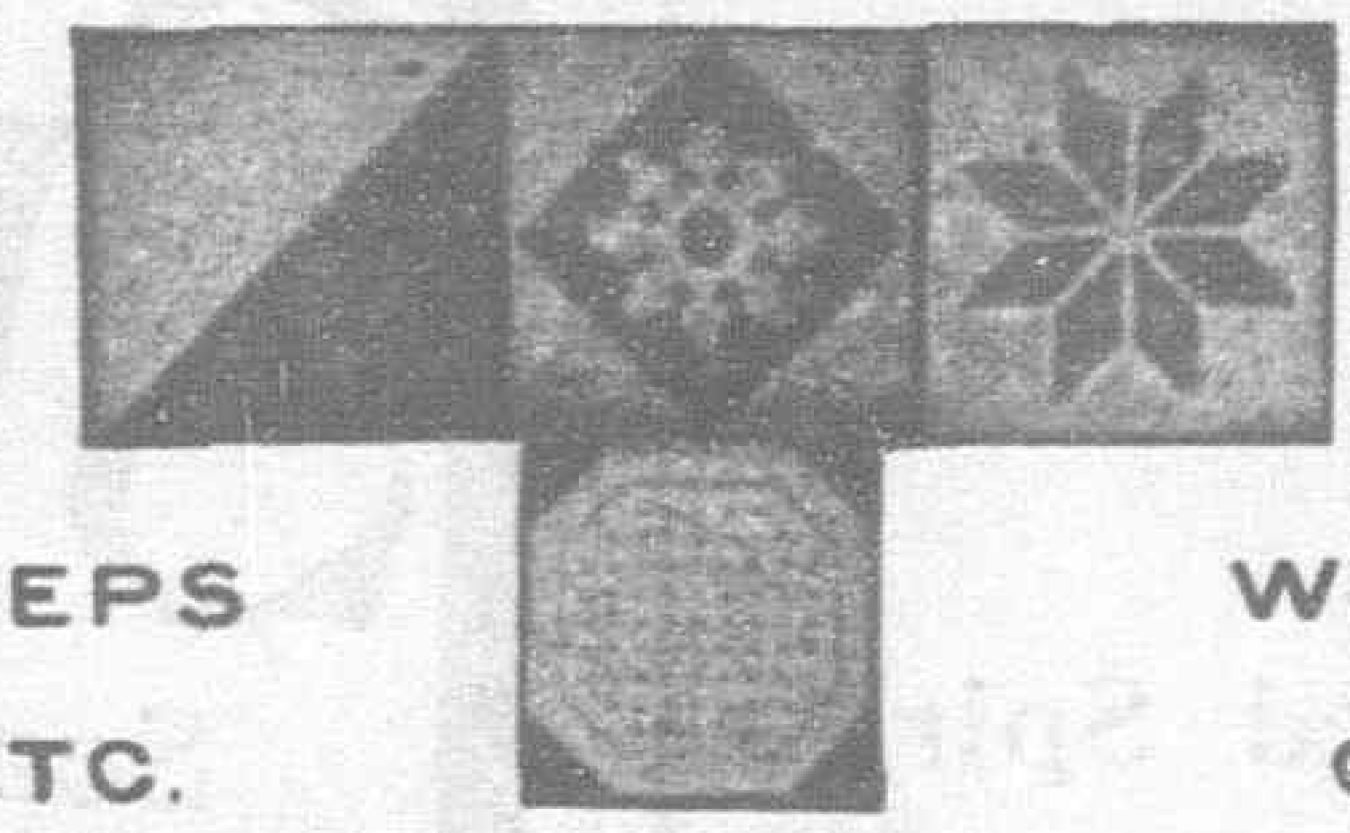

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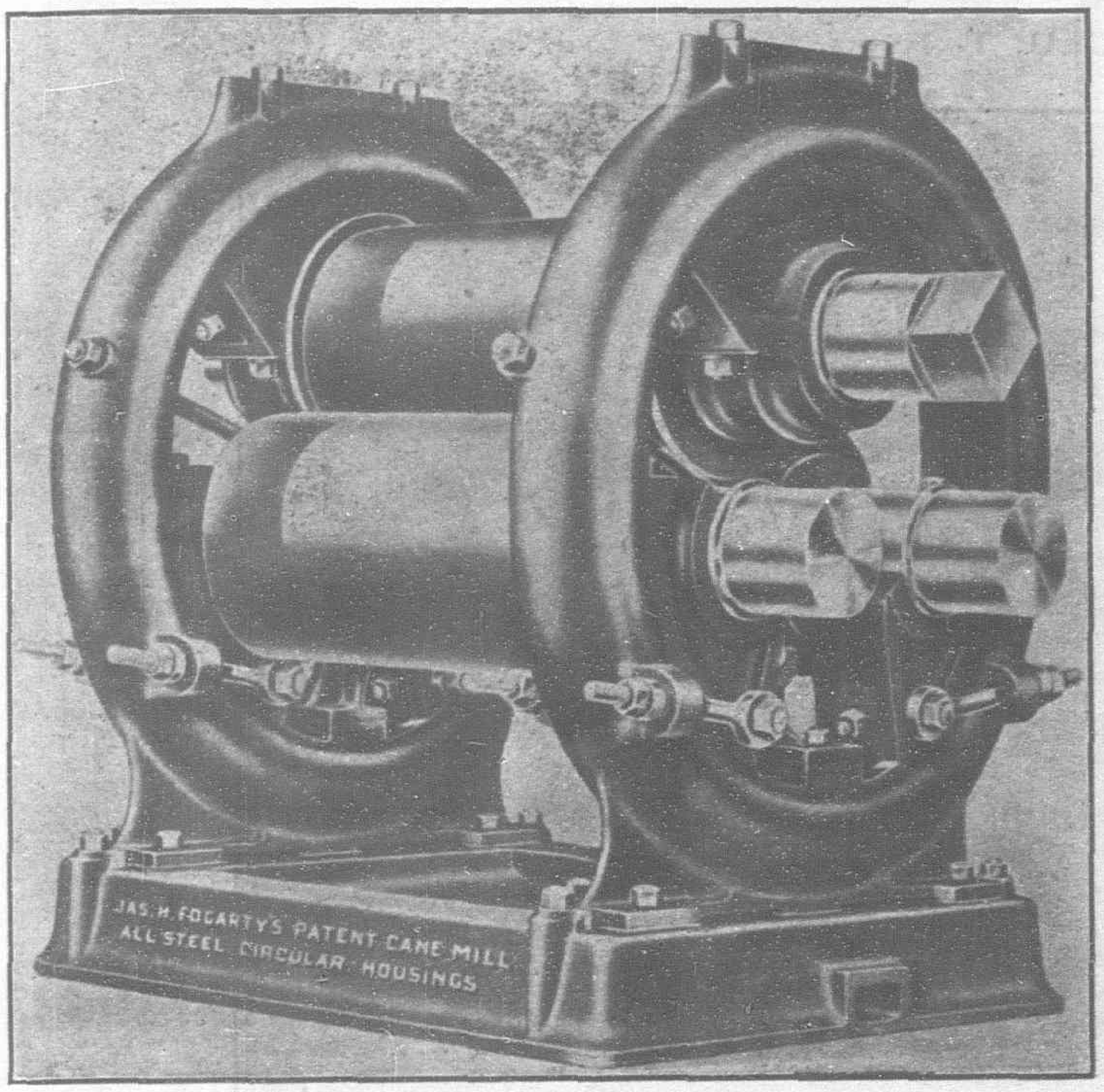
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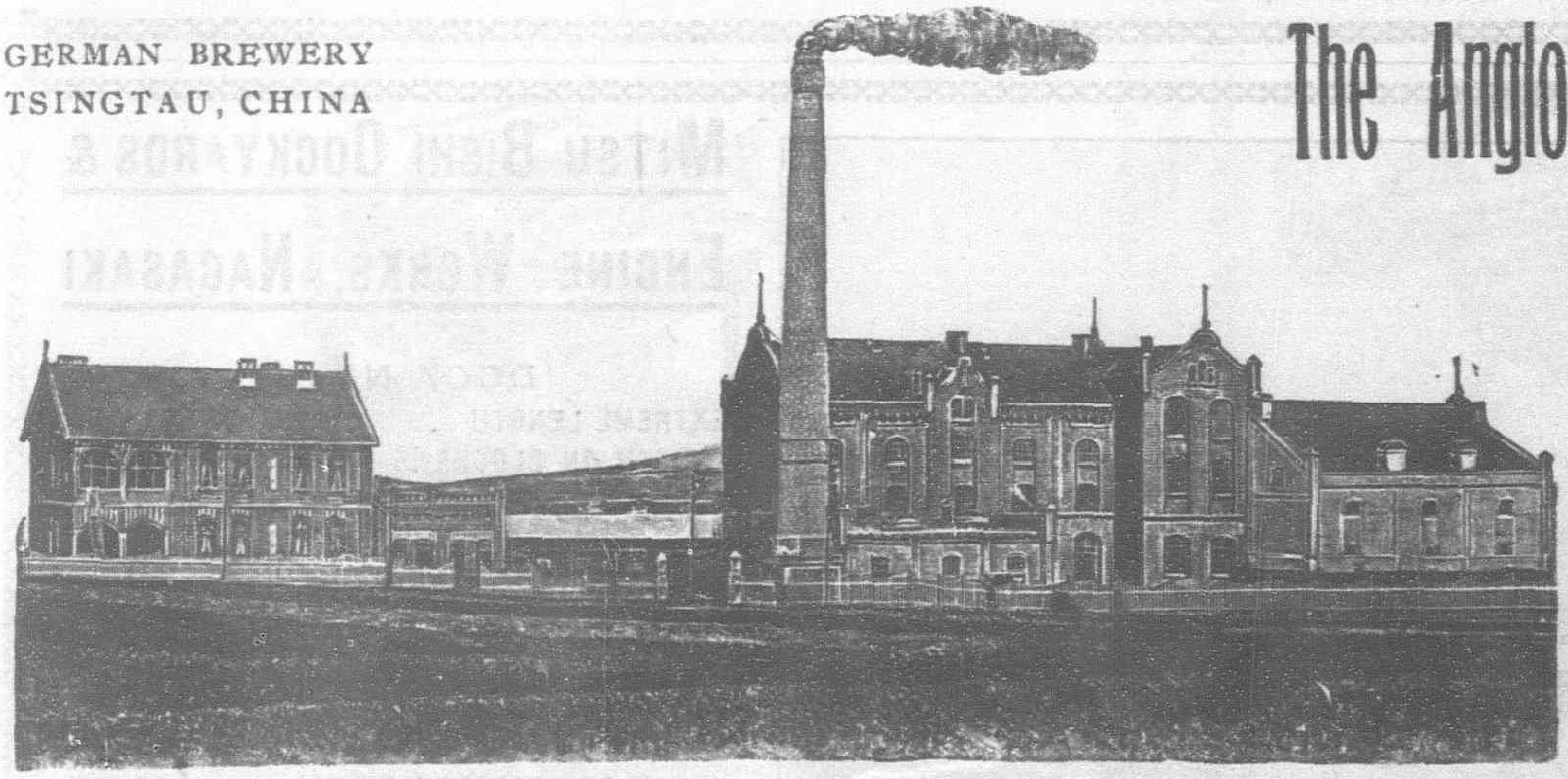

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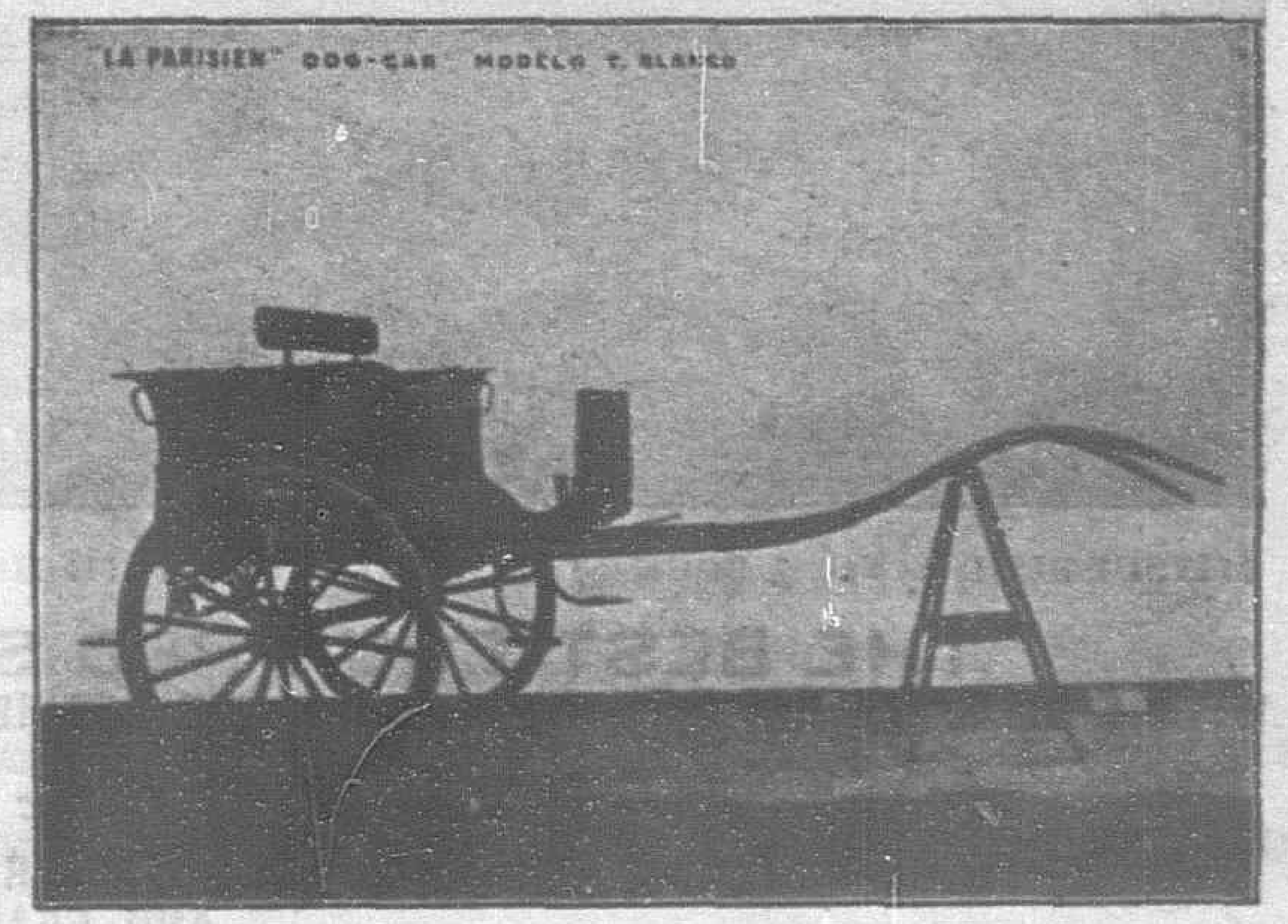

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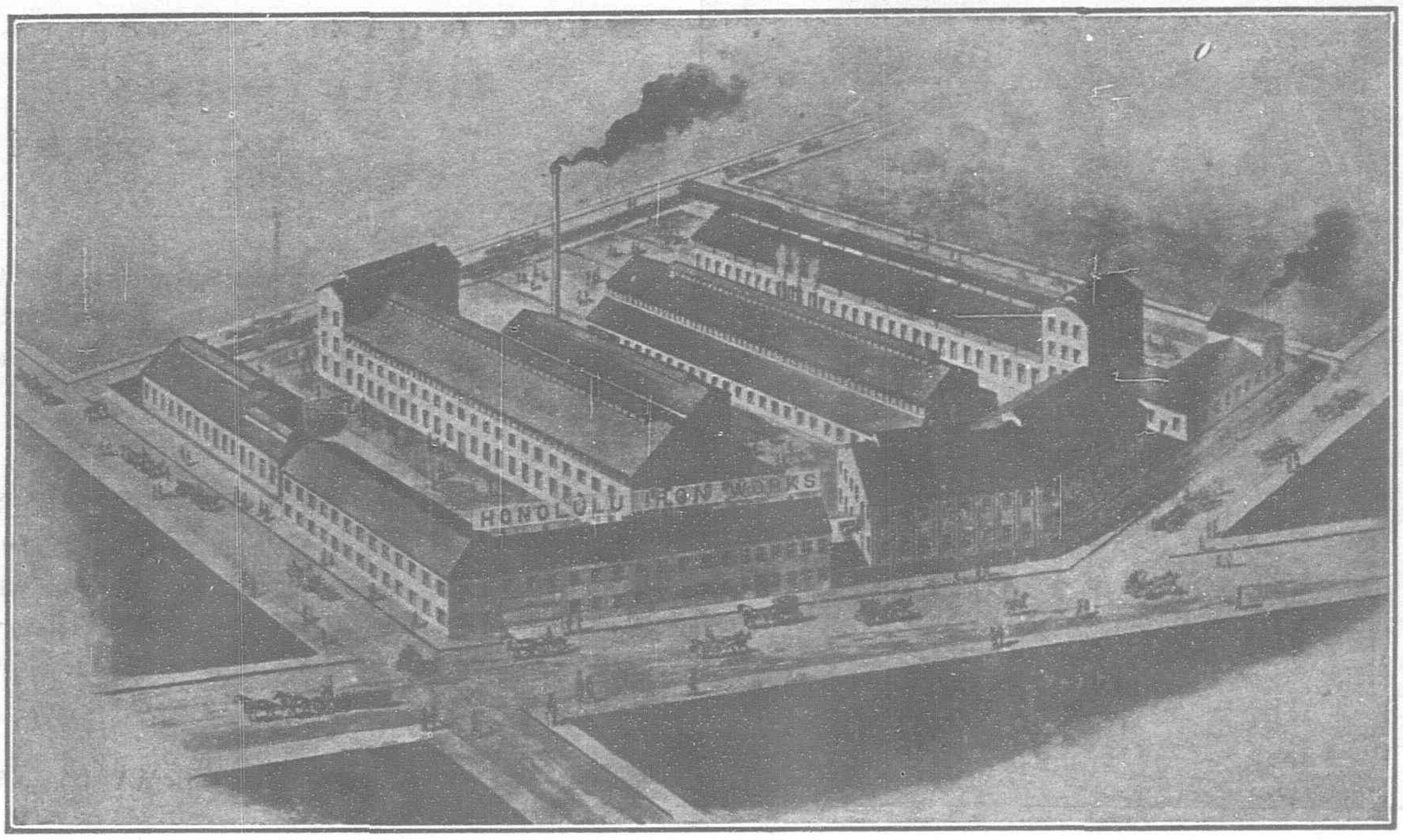

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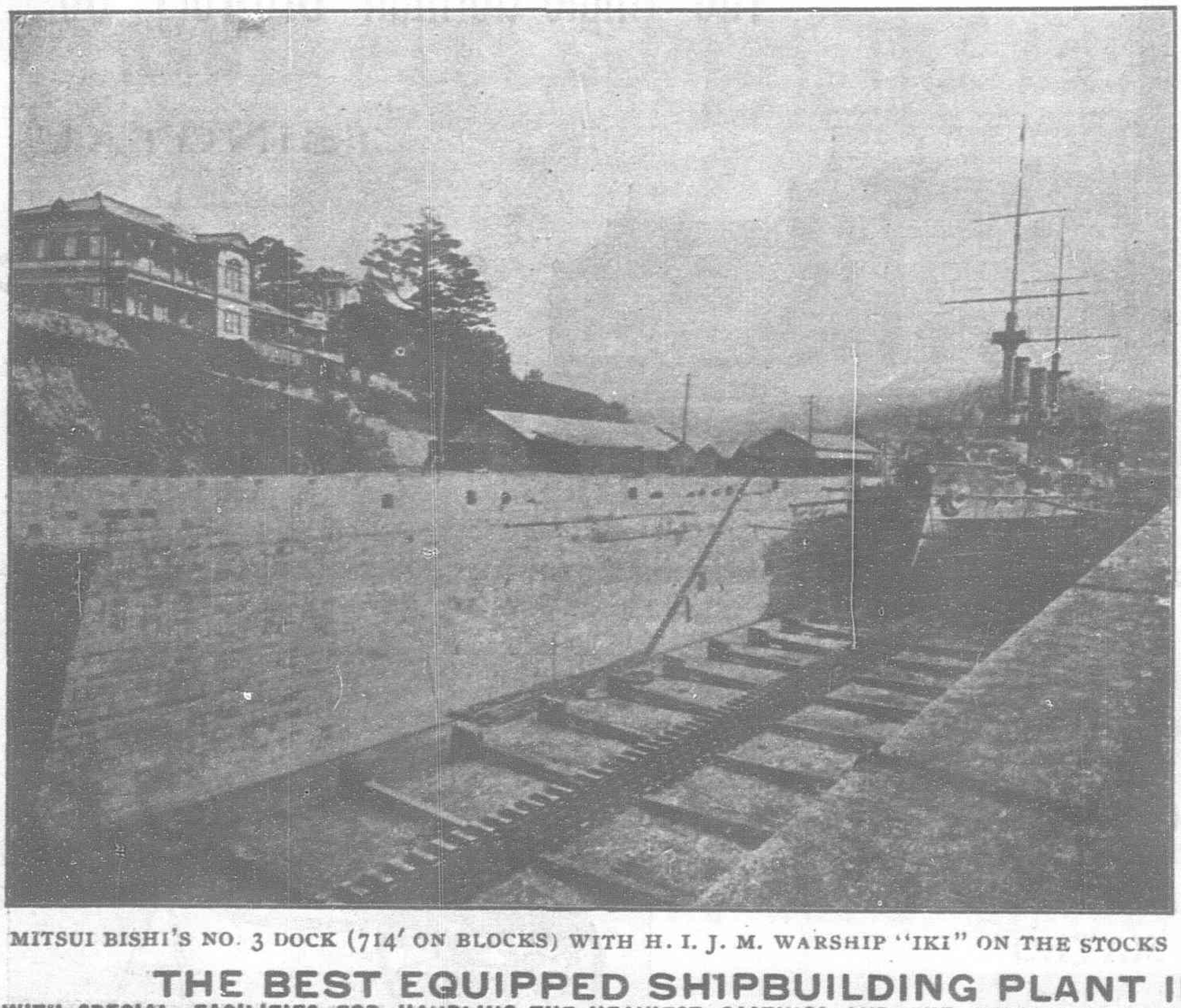

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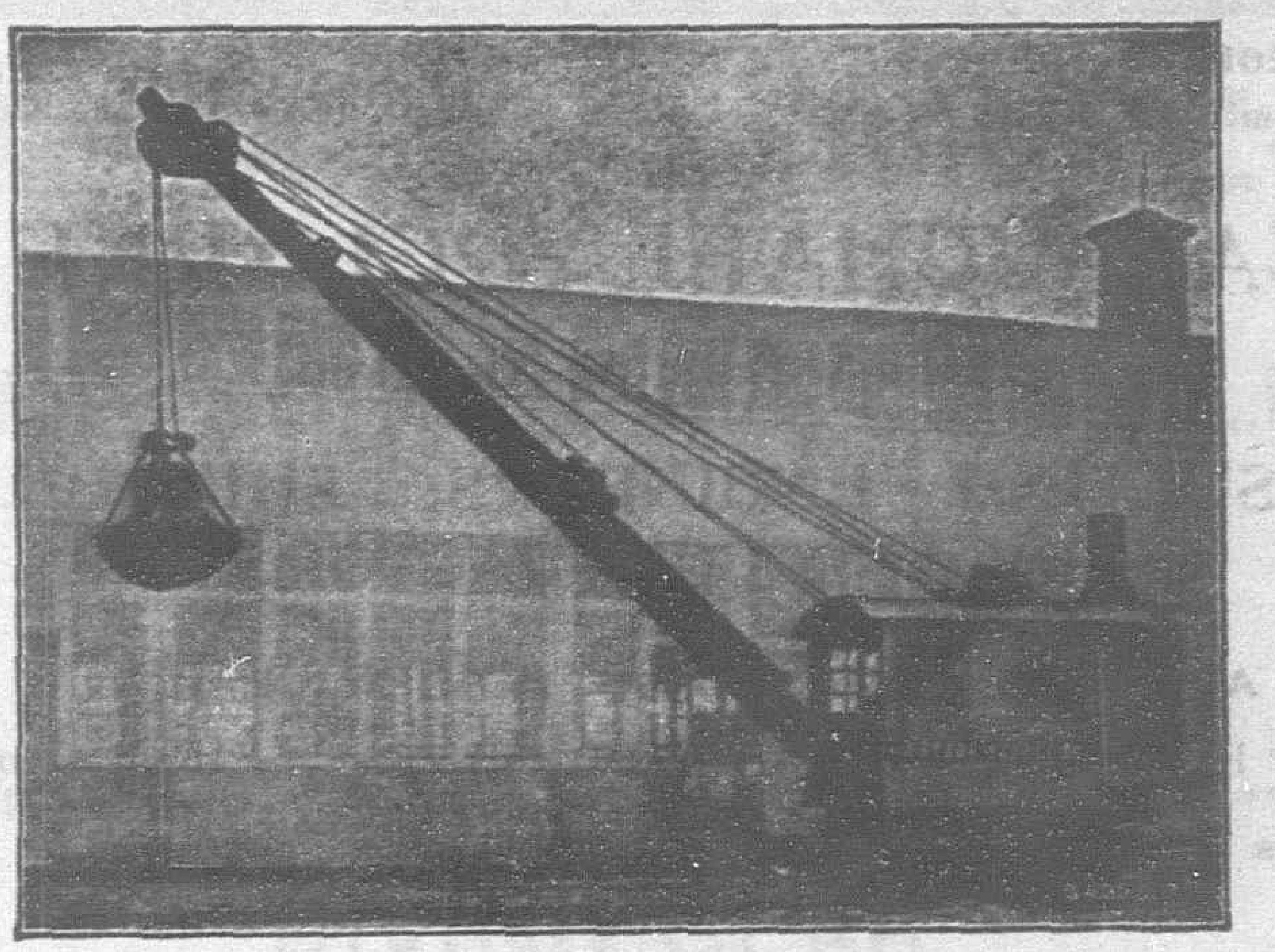

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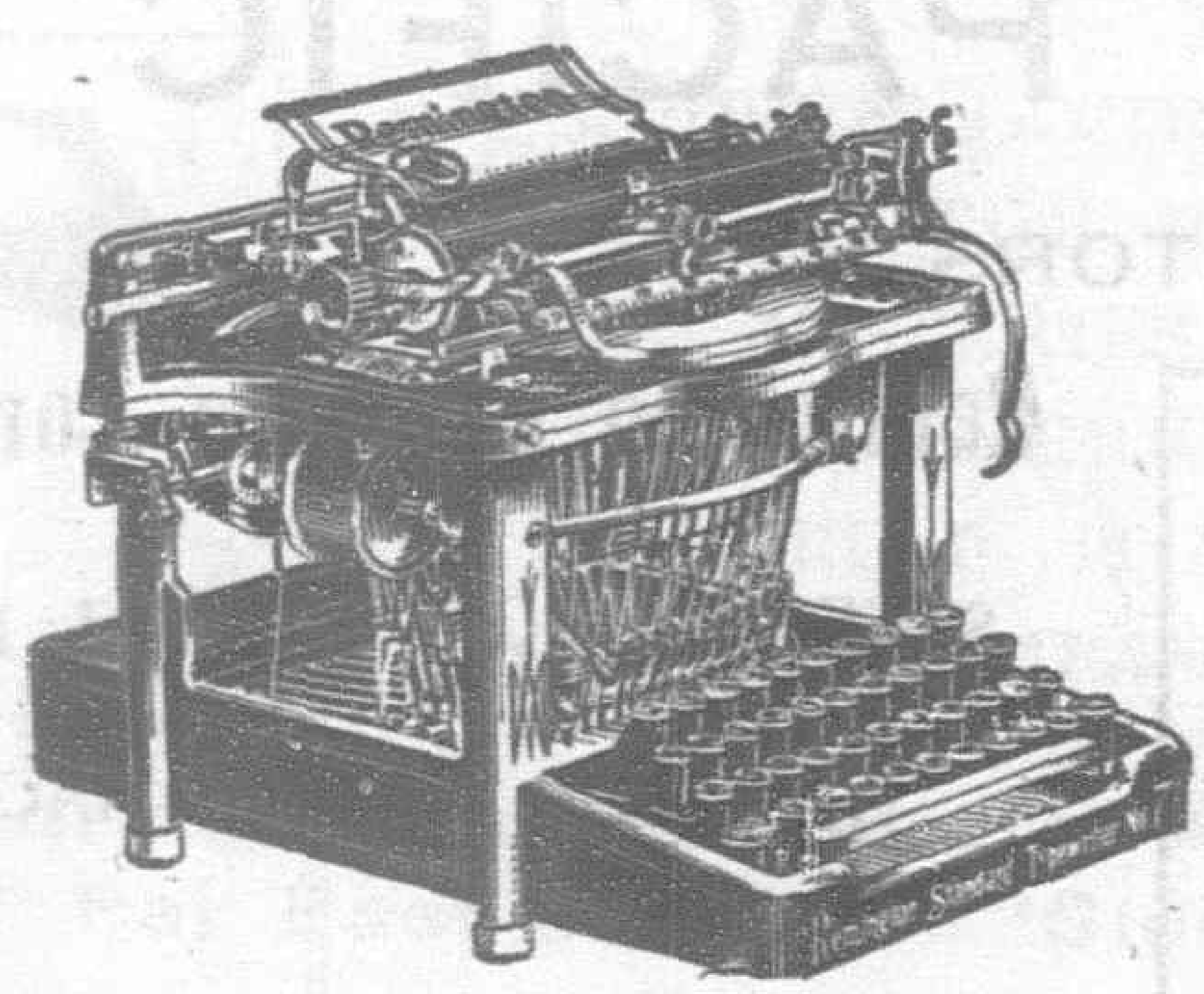

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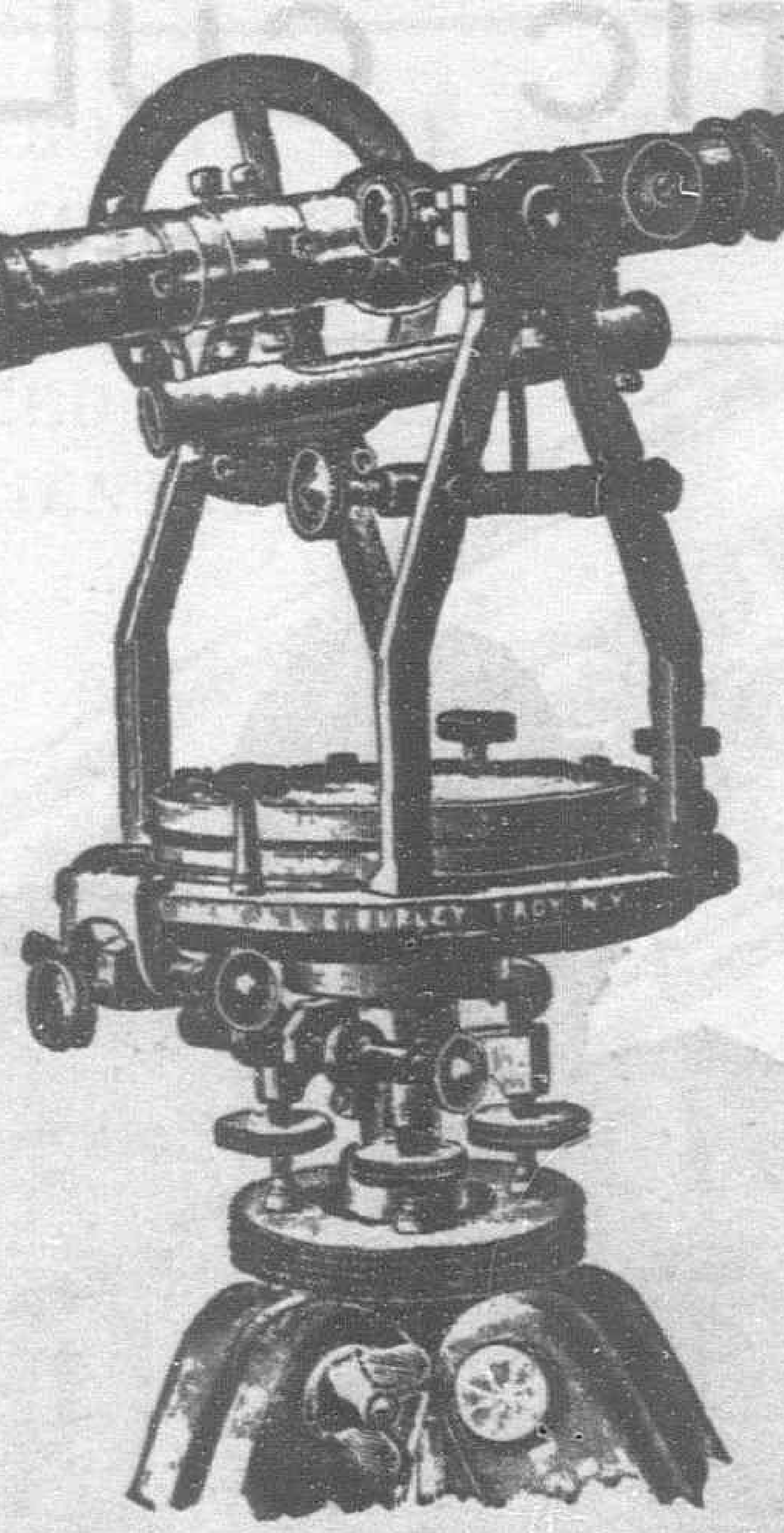

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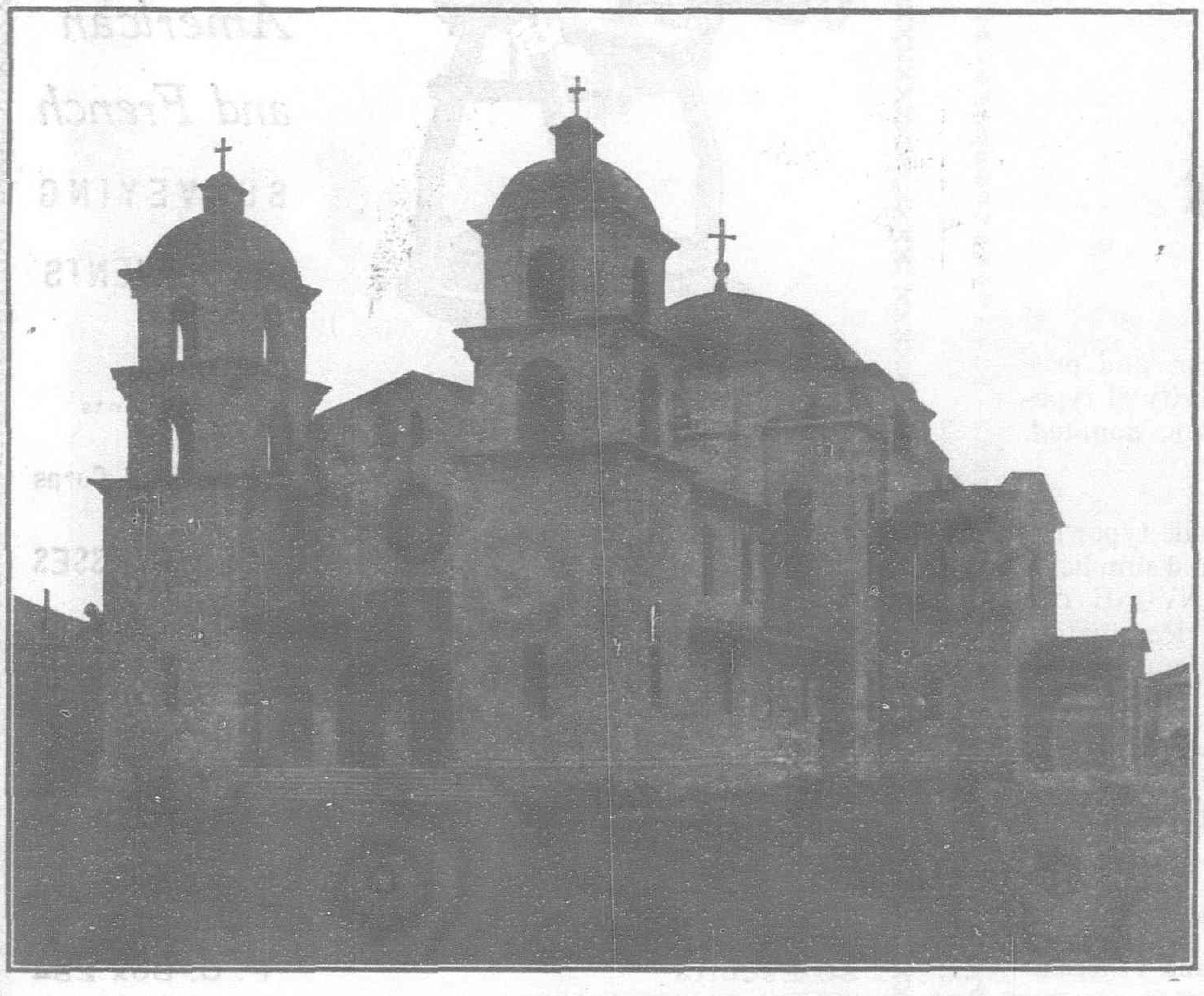

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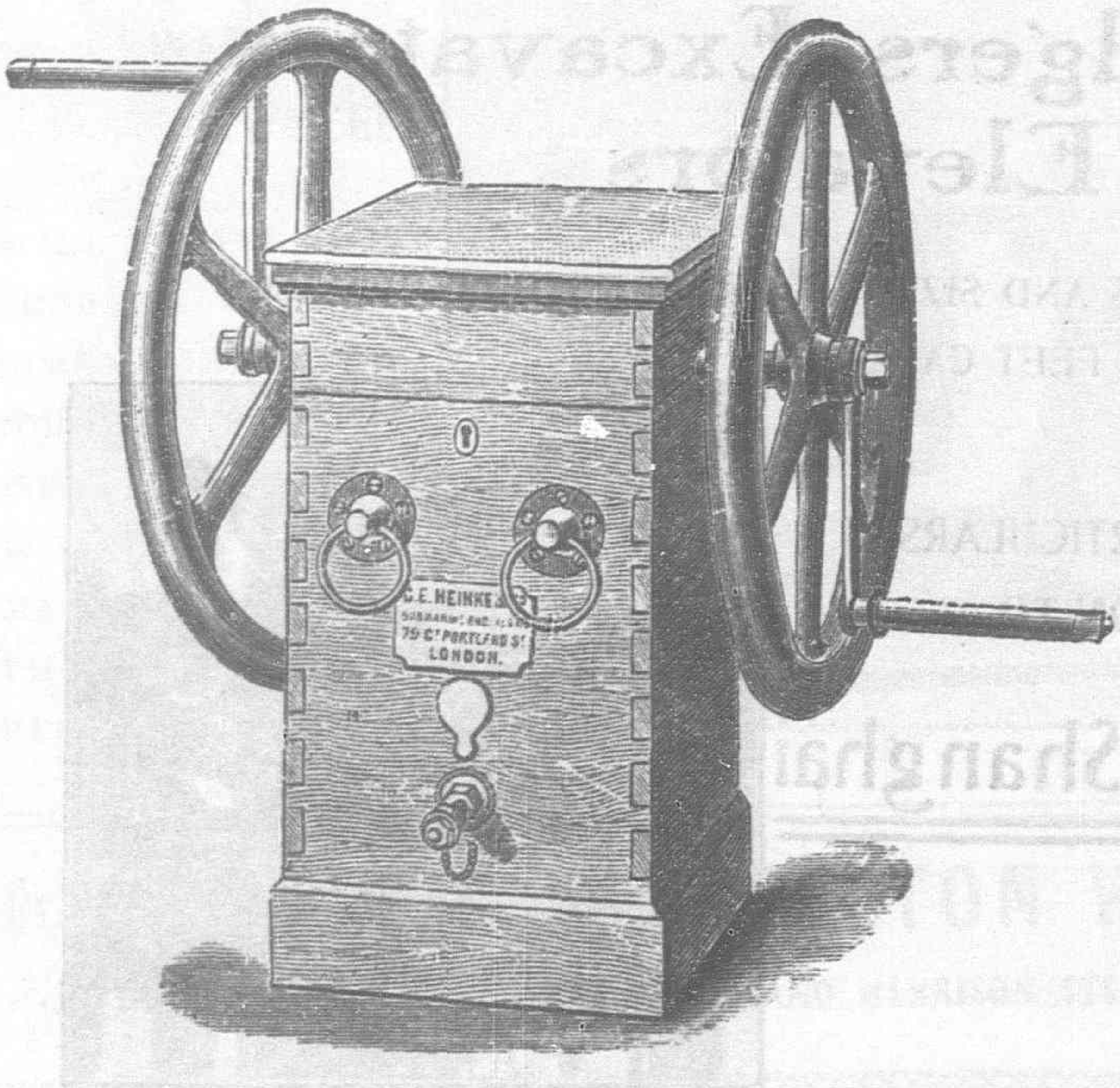

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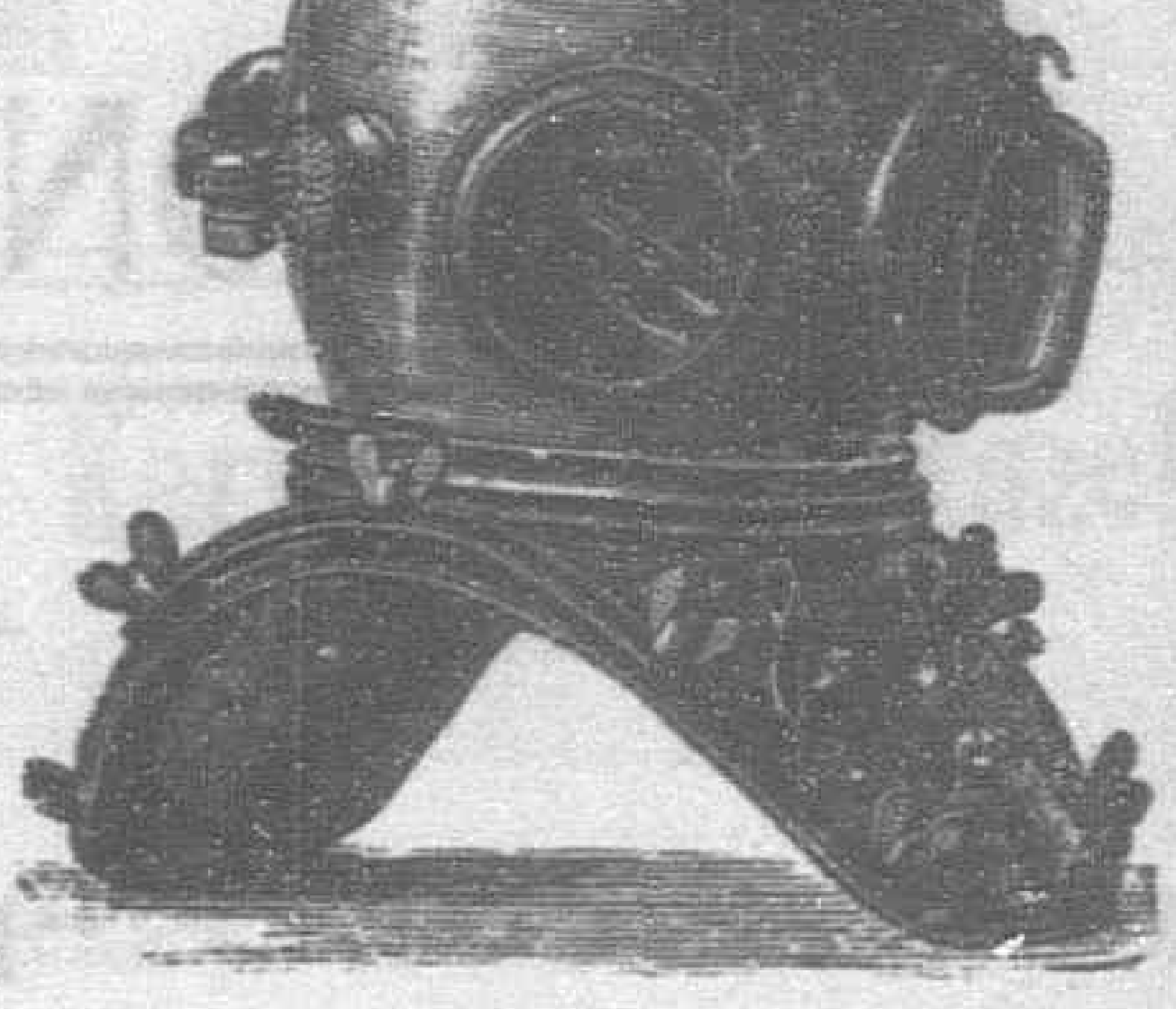

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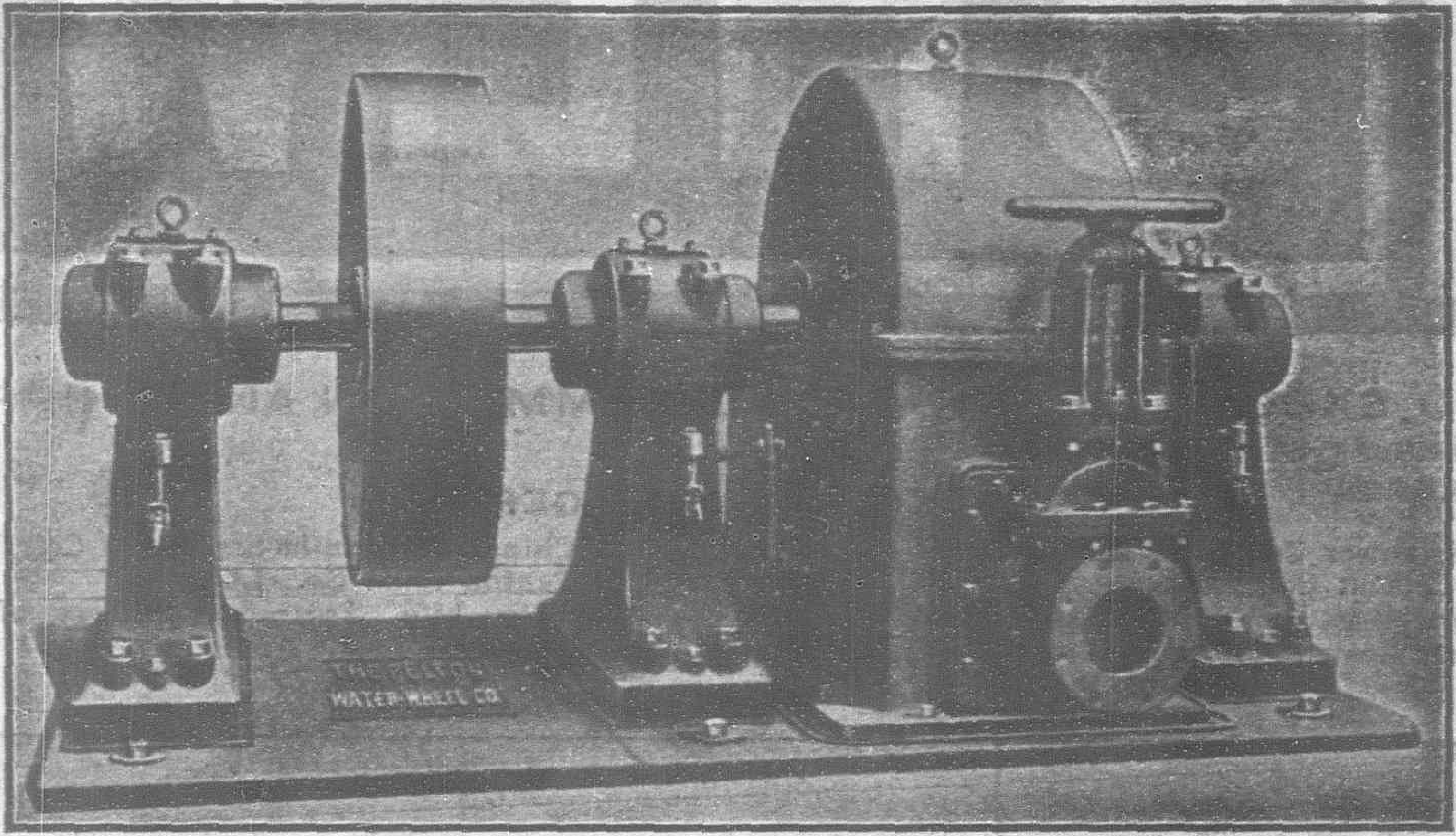

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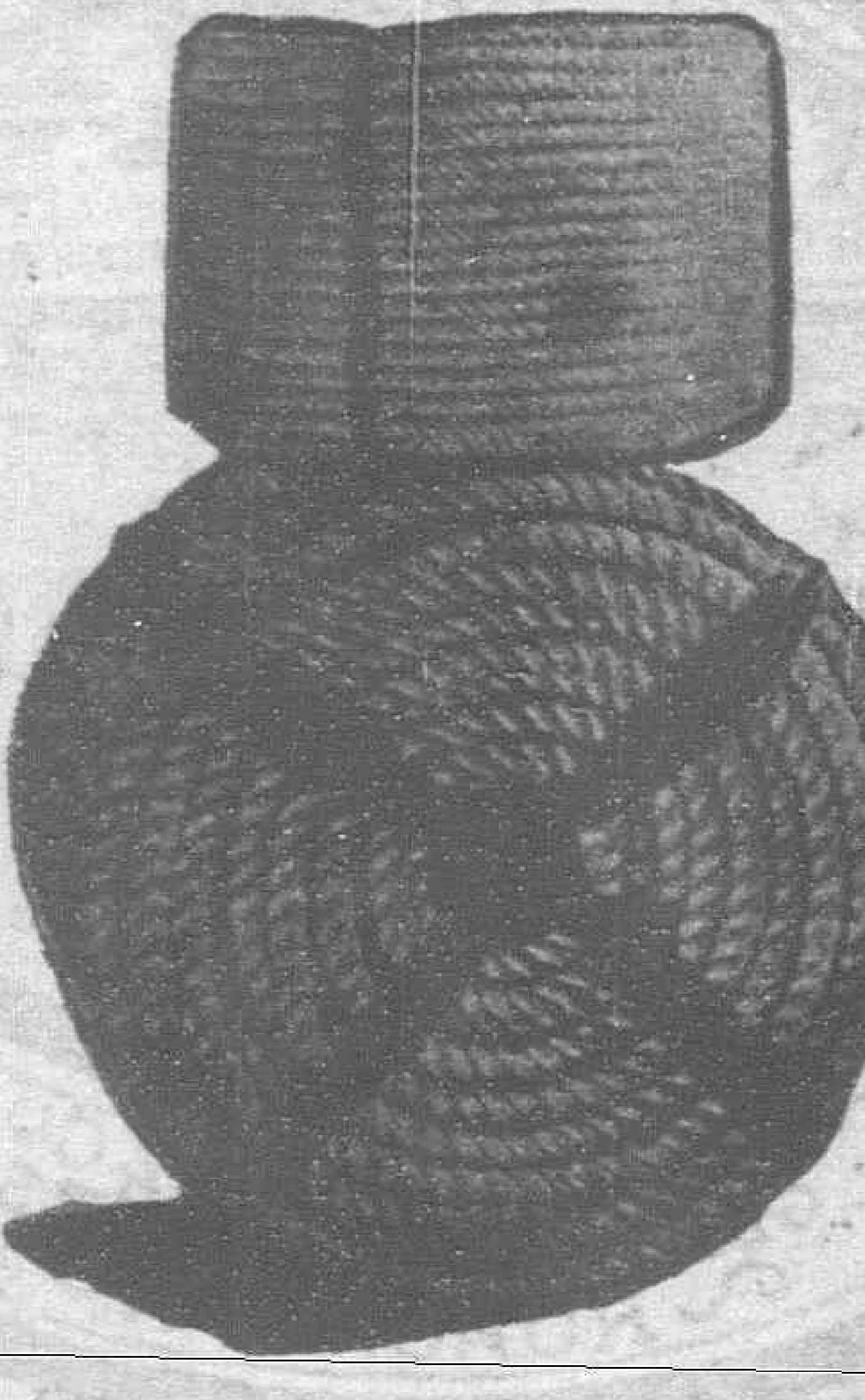

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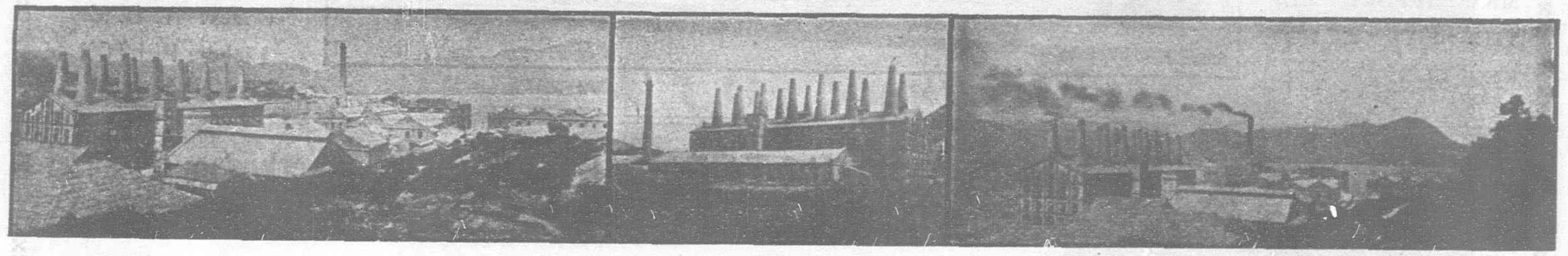

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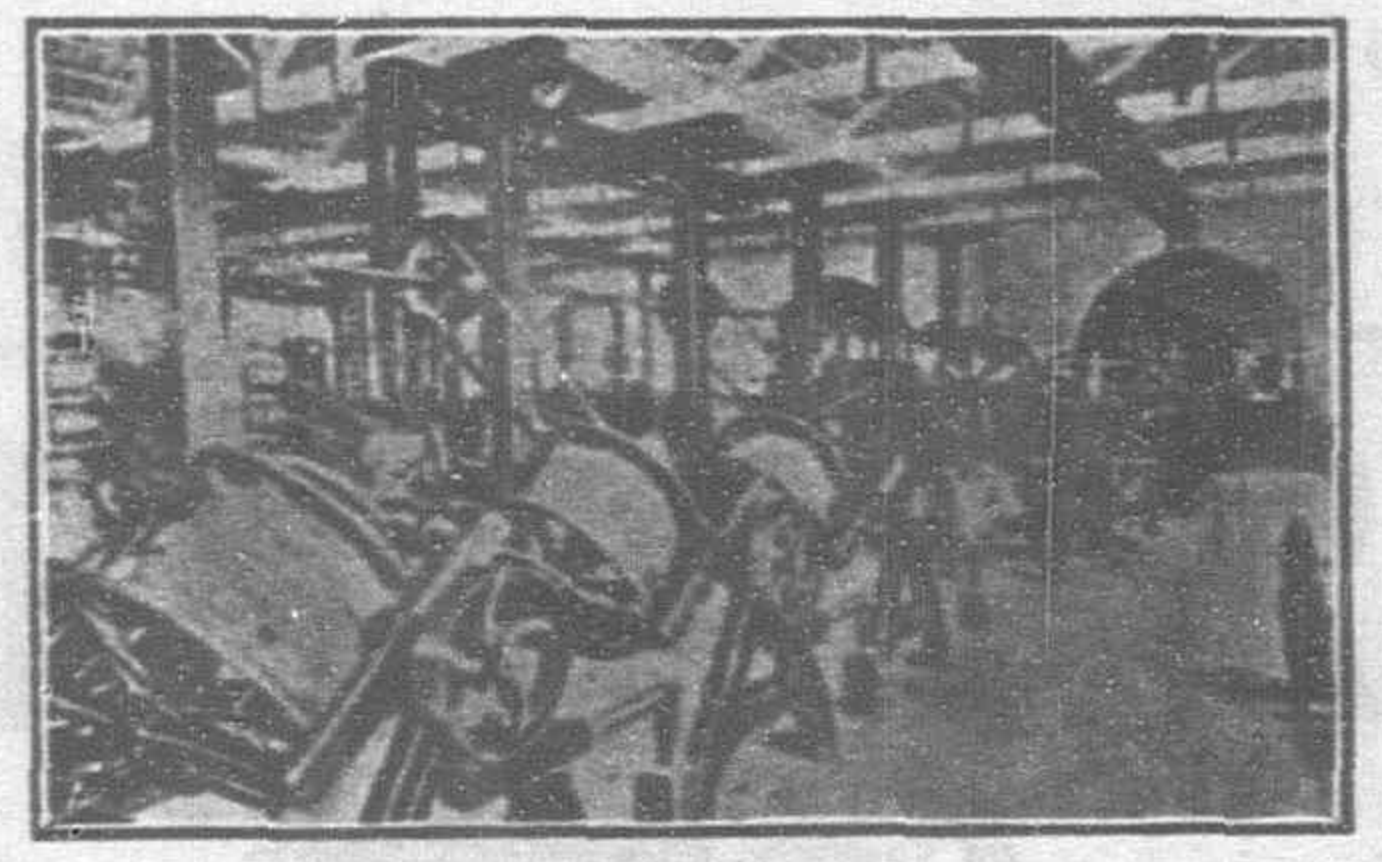

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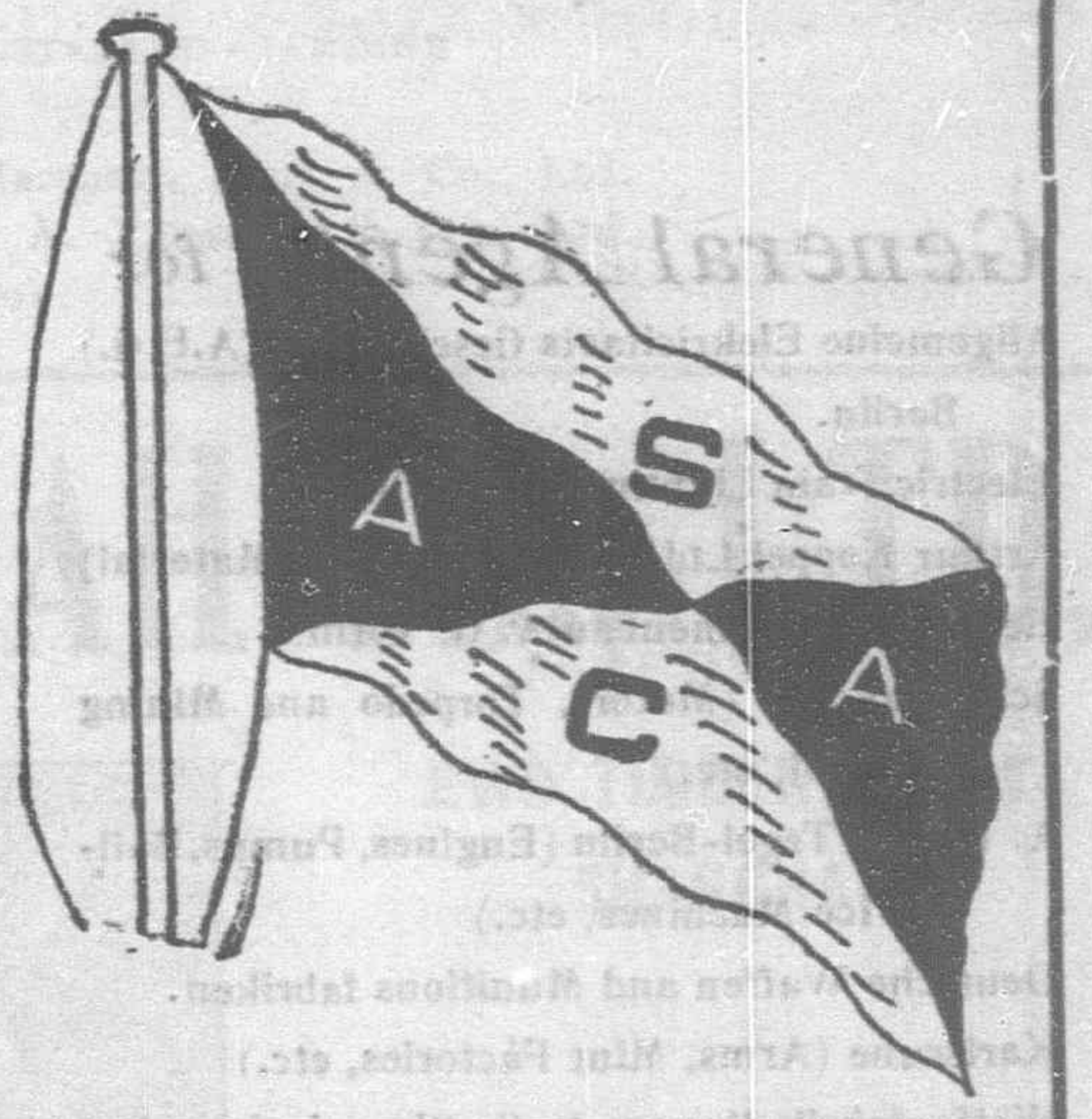

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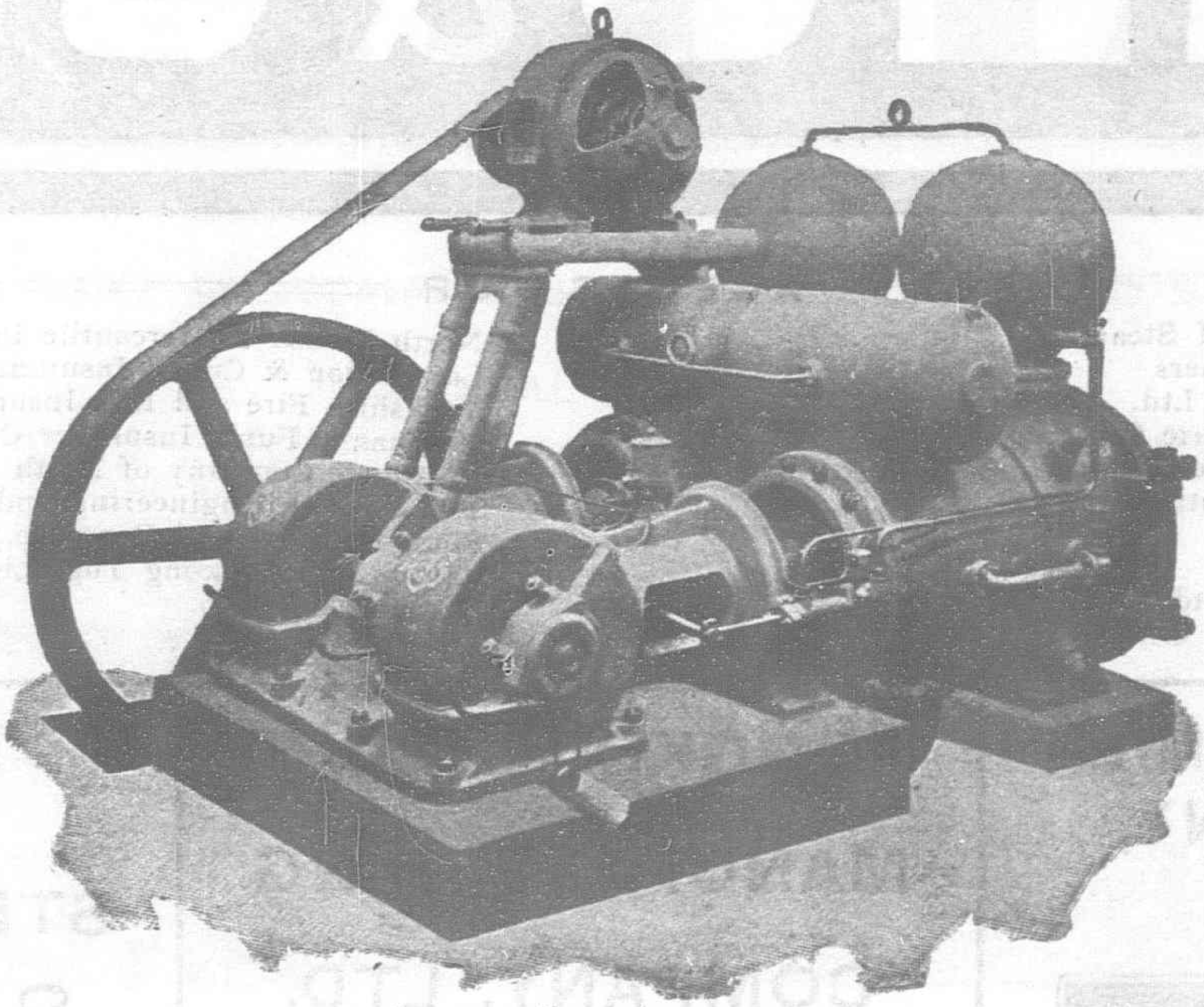

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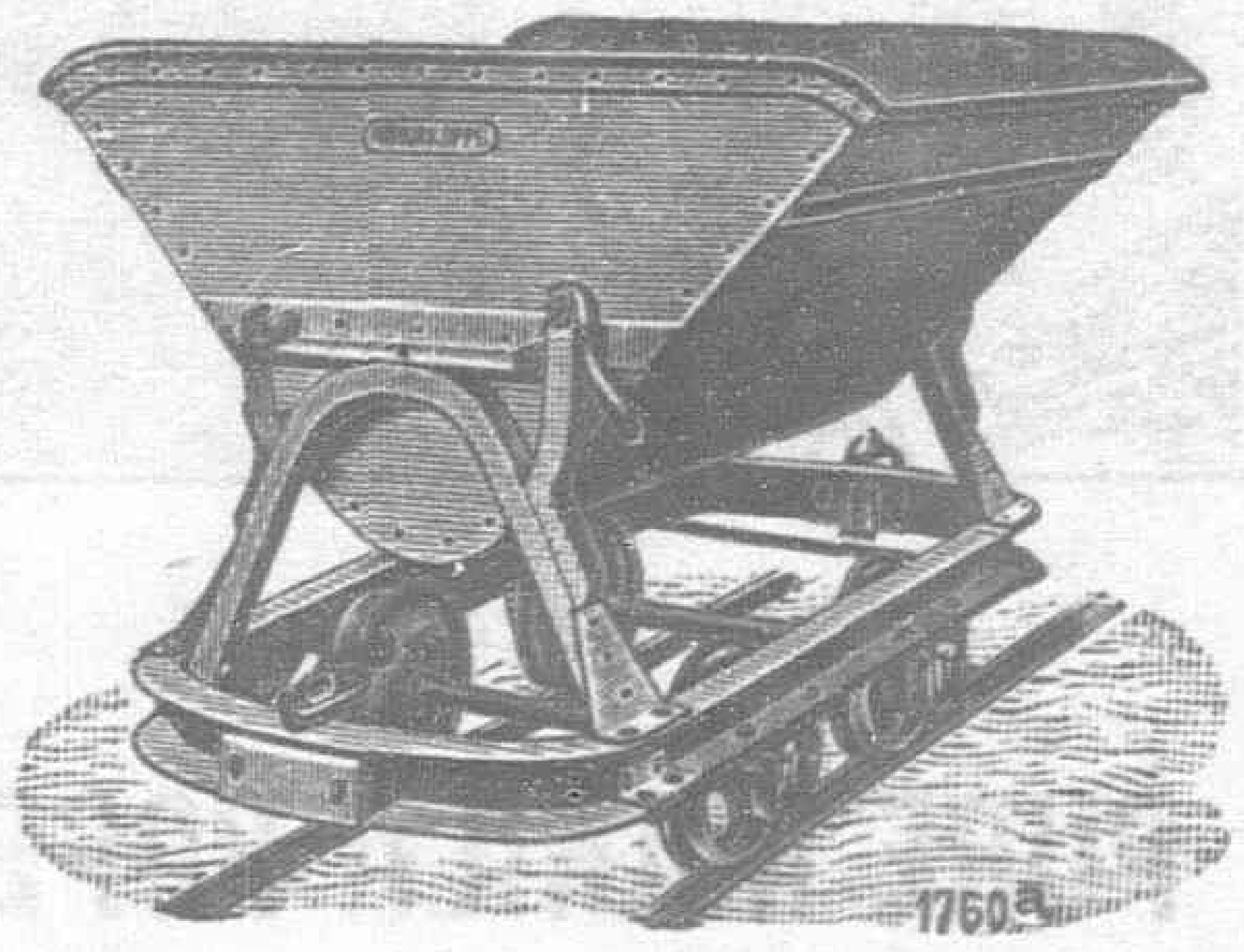

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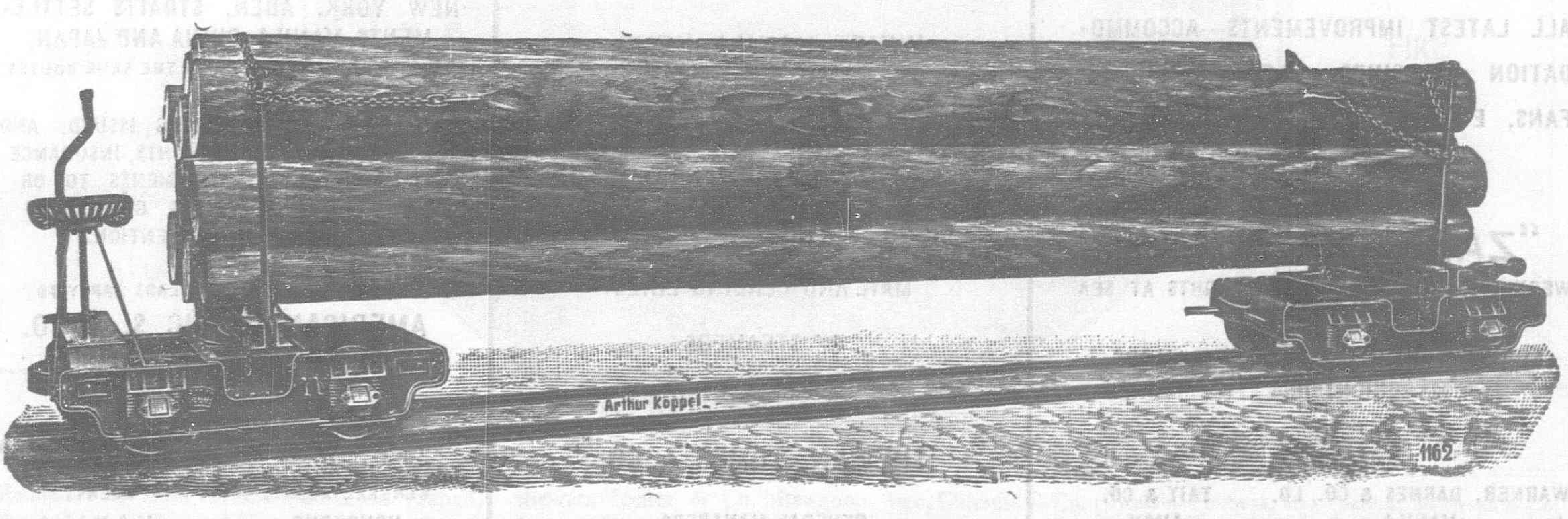

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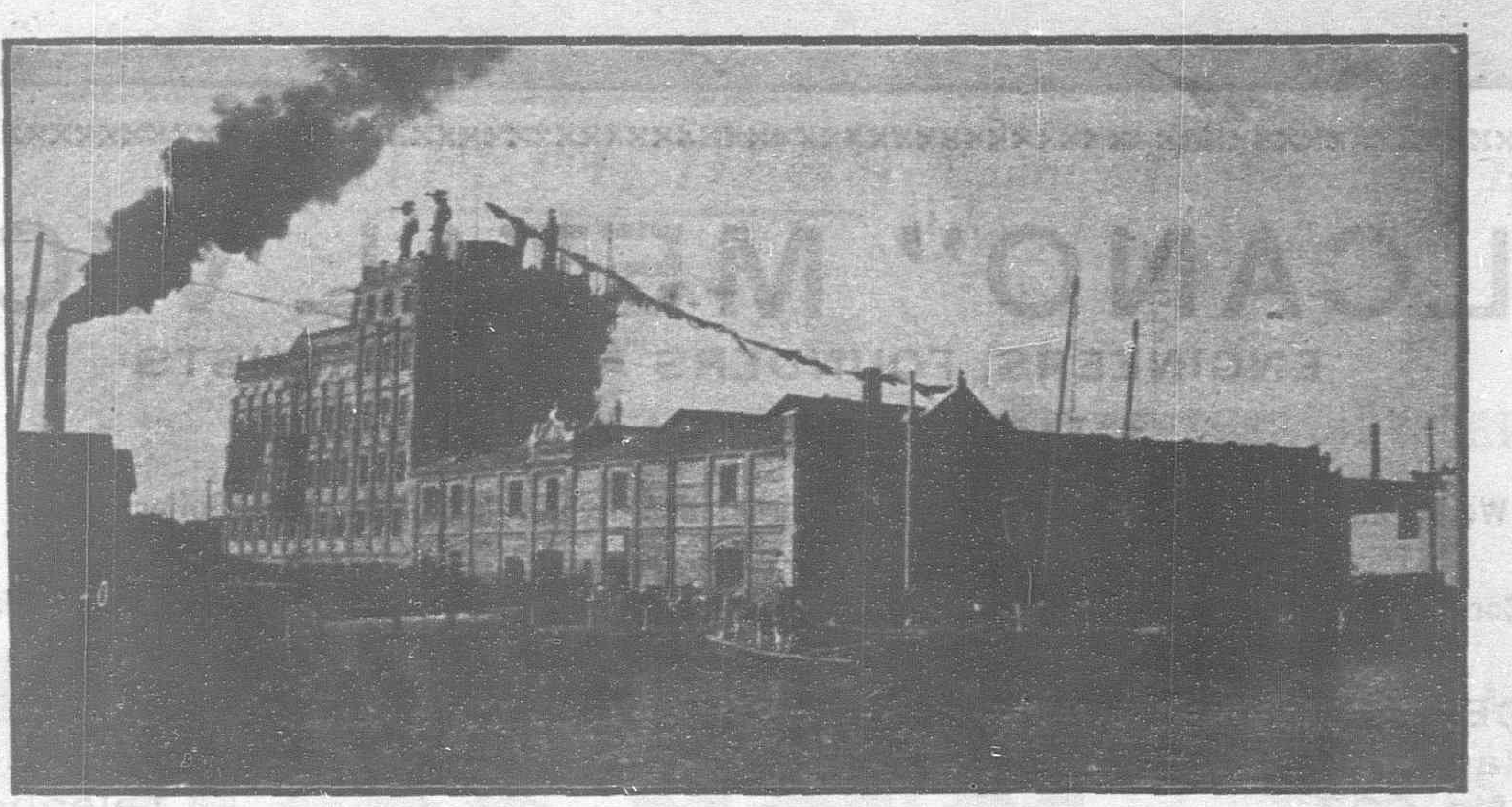

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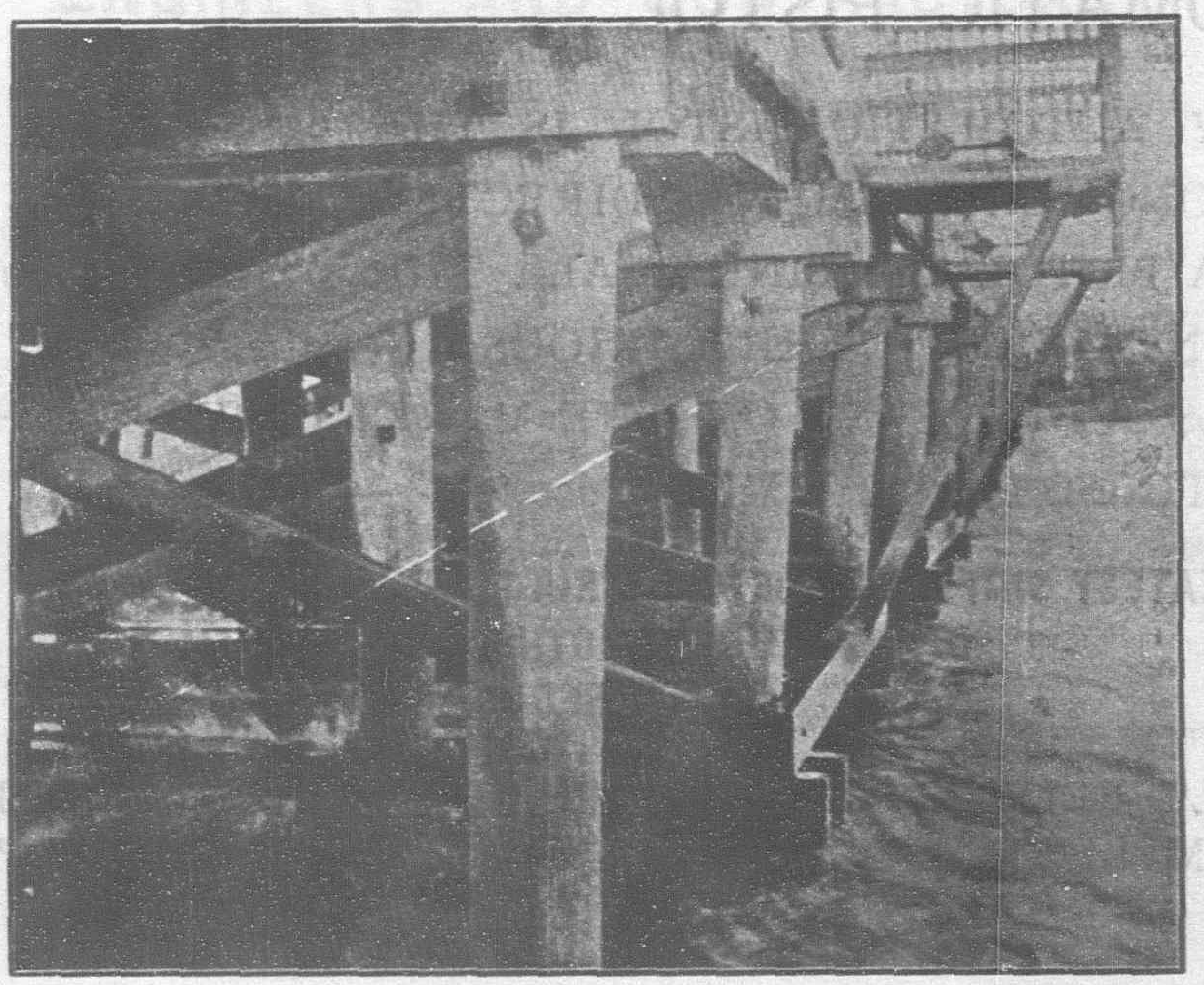

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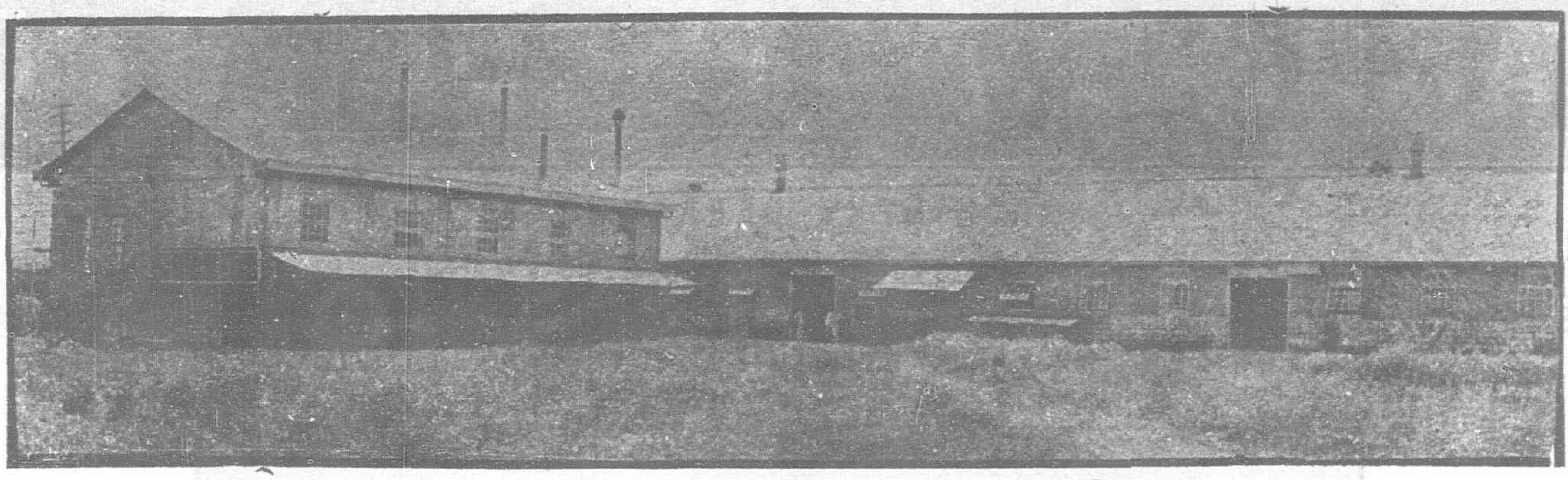

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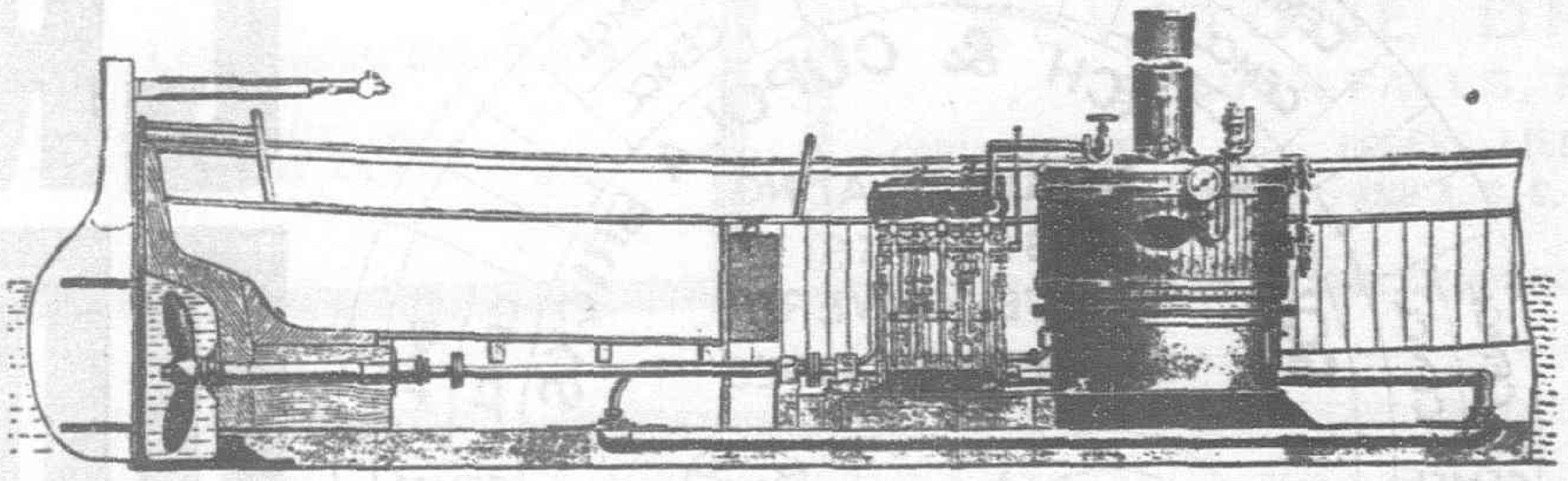

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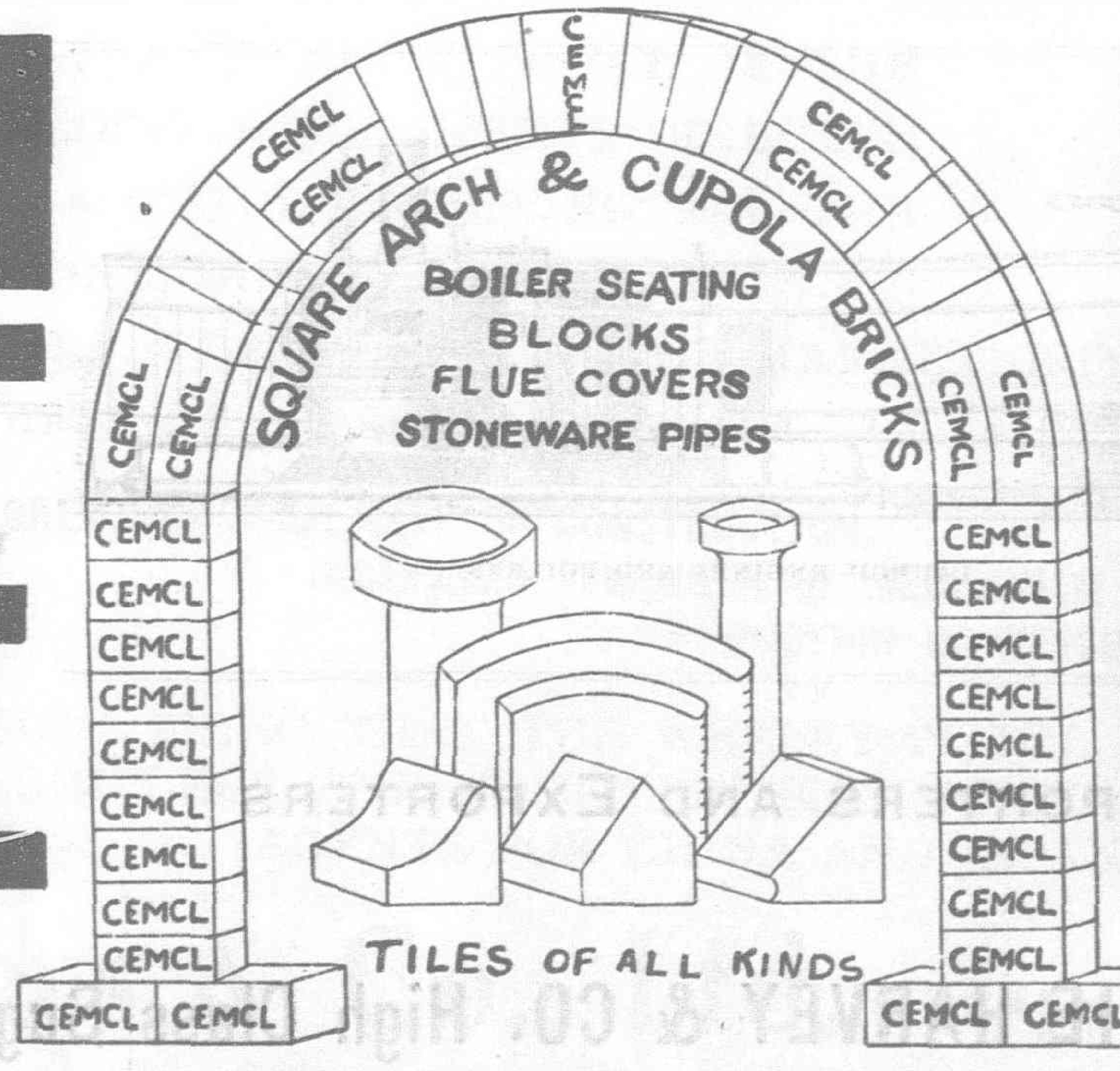

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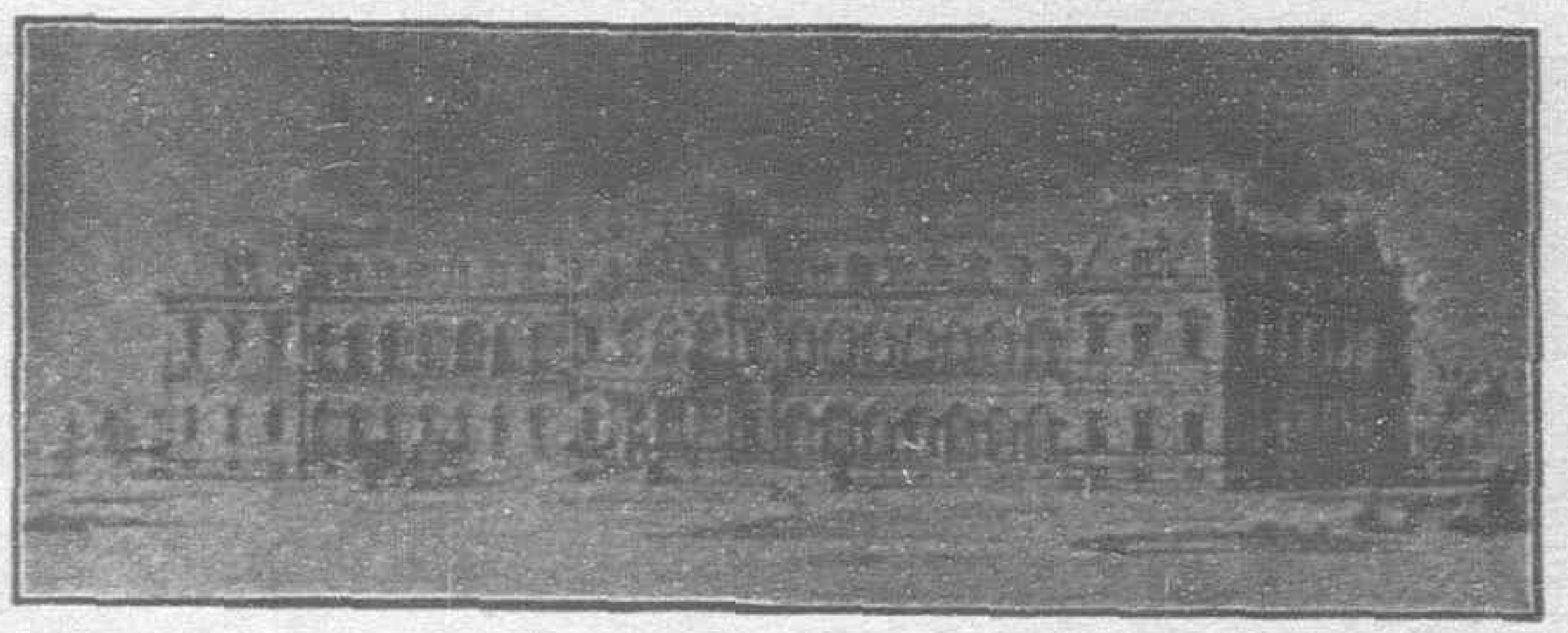

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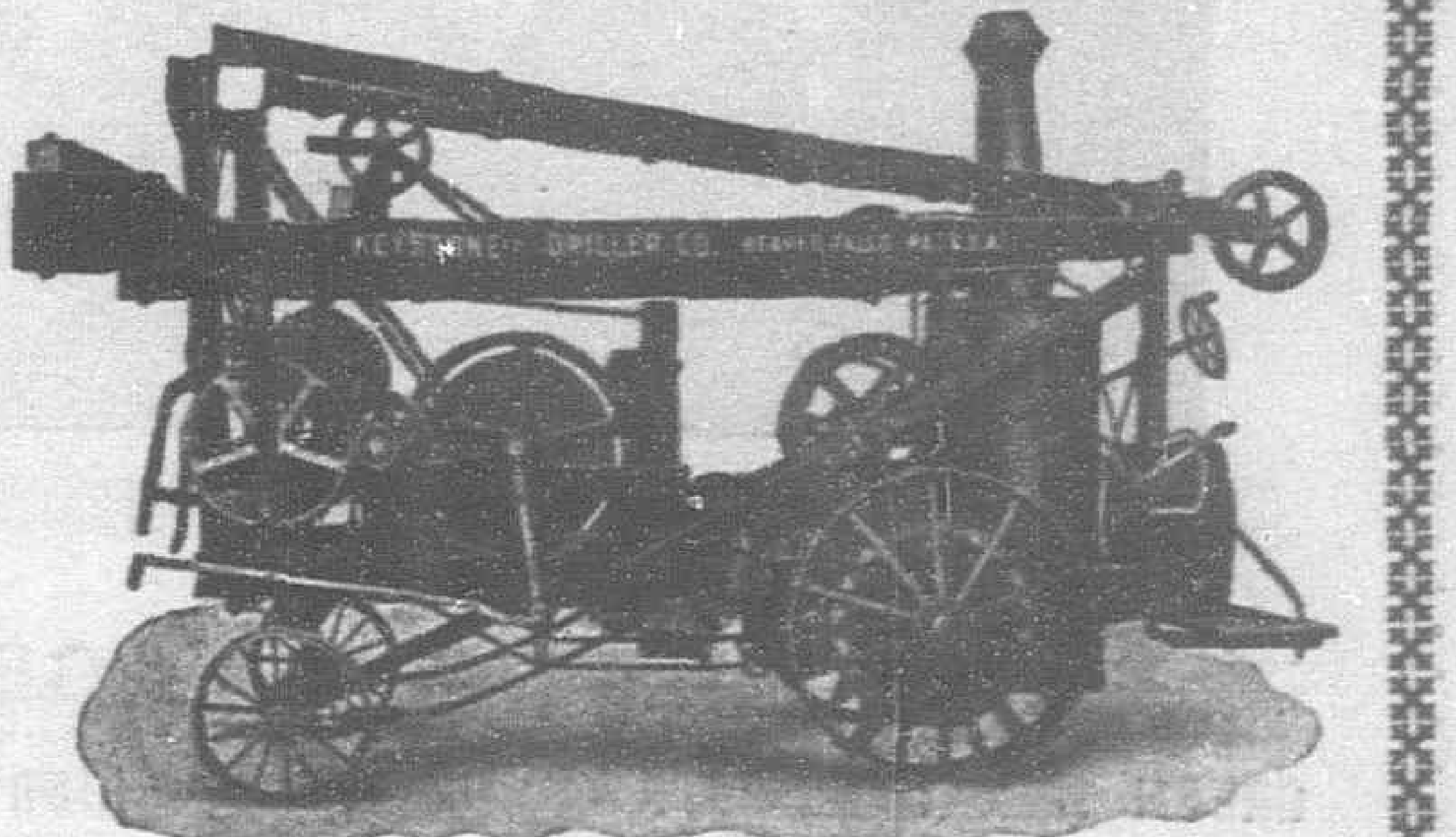
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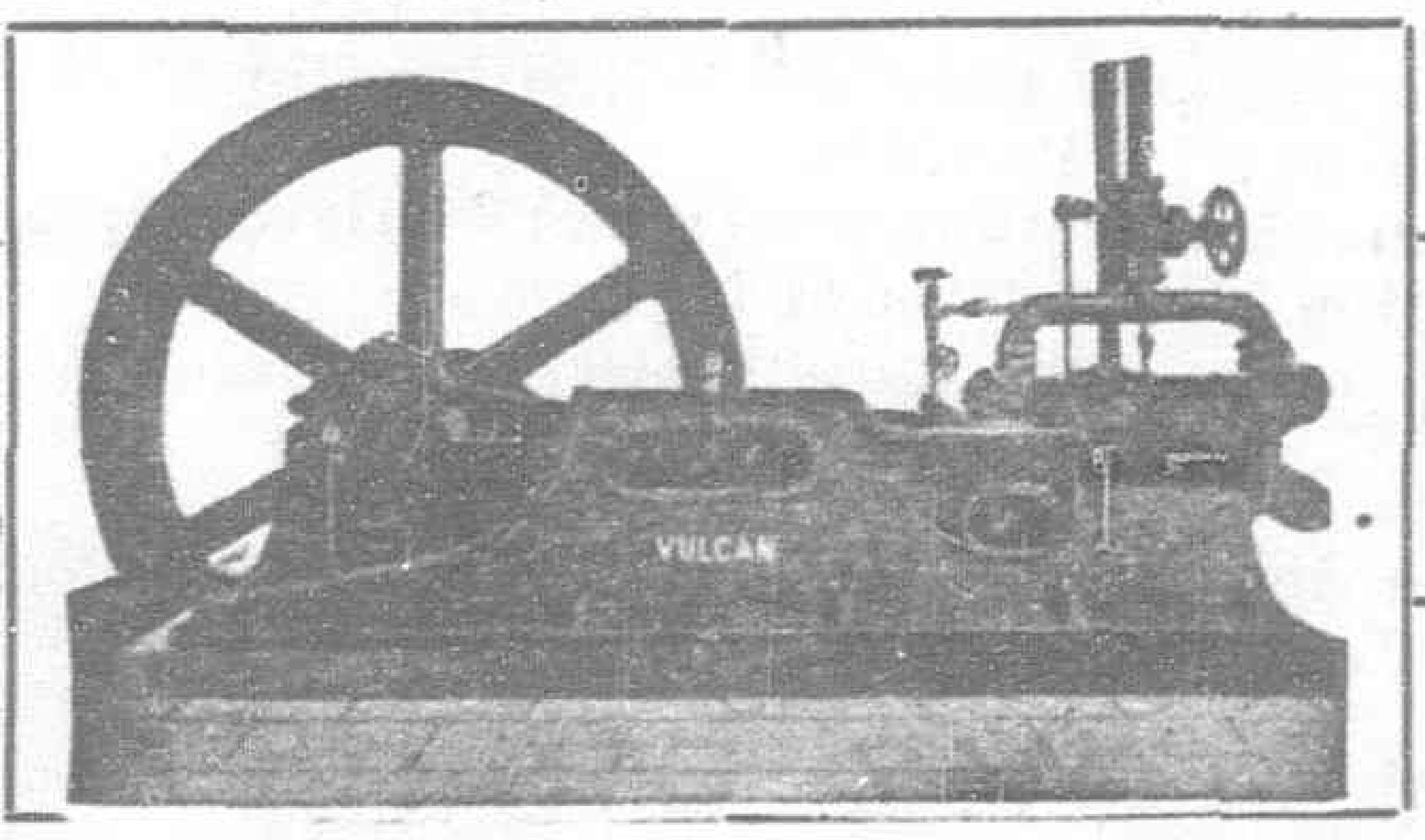

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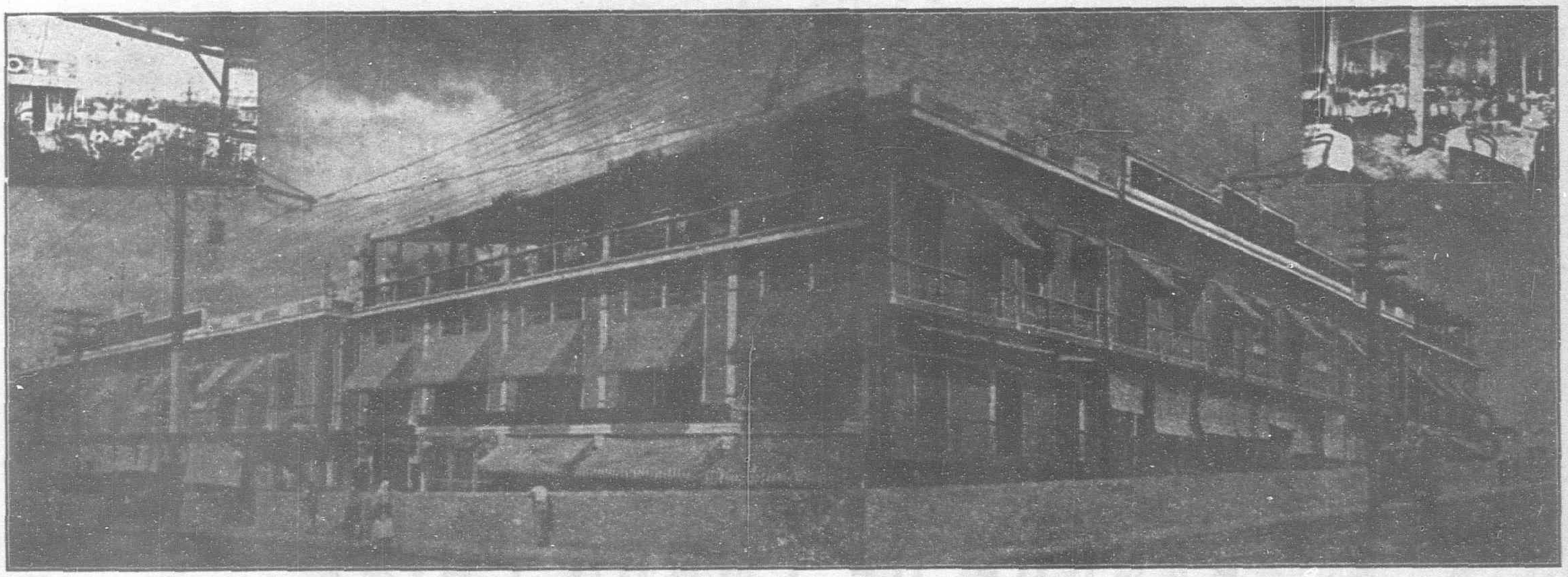

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	WIDTH	WIDTH AT ENTRANCE	DEPTH OF WATER ON SILL HIGHEST SPRING TIDES
VICTORIA GRAVING DOCK (TANJONG PAGAR) GRANITE	450′	65′	20′
ALBERT GRAVING DOCK (TANJONG PAGAR) GRANITE	480′	60′	21′
NO. 1. GRAVING DOCK (KEPPEL HARBOUR) GRANITE	415′	42′	15′
NO. 2. GRAVING DOCK (KEPPEL HARBOUR) GRANITE	444′	65′	19′
NEW DOCK (UNDER CONSTRUCTION)	811′	—	—

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Are suitable for building steel, iron, composite or wooden vessels of any size, and the Company will furnish plans, specifications, and all requisite information on application. There are a number of steel launches always in course of construction, ready for completion at short notice.

MACHINE SHOPS

The machine shops are fitted with a large variety of modern labour-saving appliances. The lathes are capable of boring cylinders 100 inches diameter, turning pistons 9′ diameter, and shafting up to 45′.

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TANJONG PAGAR WHARF—Length two-mile; low water 20′ to 45′
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Powerful sheers and cranes for lifting boilers, etc. (45 tons).
Extensive godowns, capacity 300,000 tons.

COMPLETE EQUIPMENT OF SALVAGE APPLIANCES, PUMPS, ETC.—POWERFUL STEAM TUGS, STEAM LAUNCHES AND LIGHTERS—FRESH WATER—ELECTRICAL REQUIREMENTS SUPPLIED.

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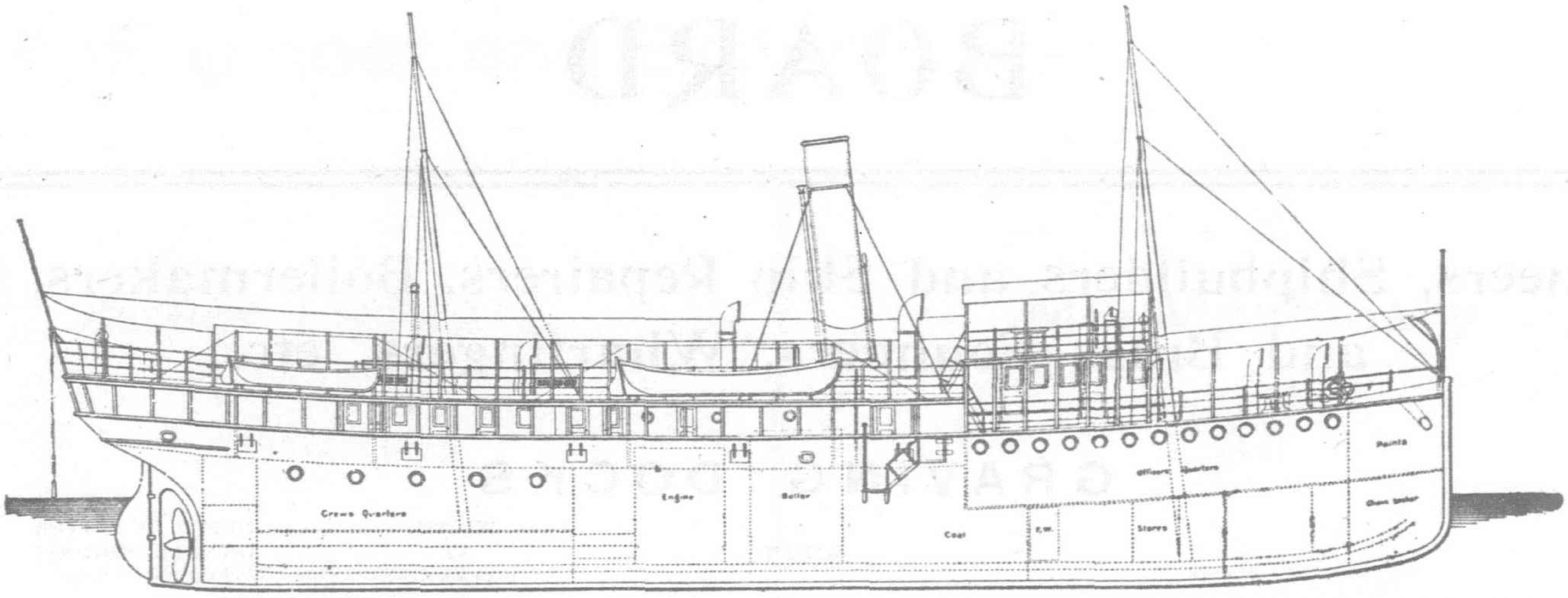

U. S. COAST & GEODETIC SURVEY STEAMER "FATHOMER" BUILT BY THE HONGKONG AND WHAMPOA DOCK CO., LTD., FOR THE UNITED STATES GOVERNMENT, FOR SERVICE IN THE PHILIPPINES

THE COMPANY'S DOCKS at KOWLOON, TAI-KOK-TSUI and ABERDEEN are in efficient working order, and the attention of Captains and Shipowners is respectfully solicited to the advantages which these Establishments offer for Docking and Repairing Vessels.

The Company has SIX GRANITE DOCKS and TWO PATENT SLIPS of the following dimensions:—

NAME OF DOCK OR SLIP	LENGTH ON KEEL BLOCKS	BREADTH AT ENTRANCE	DEPTH OVER SILL AT ORDINARY SPRING TIDES	RISE OF TIDE	
				SPRINGS	NEAPS
KOWLOON	*Feet.*	*Feet.*	*Feet.*	*Feet.*	*Feet.*
No. 1 Dock, Kowloon	576	86 feet top 70 ft. bottom	30′	7′ 6″	3
No. 2 Dock, Kowloon	371	74′	18′ 6″	7′ 6″	—
No. 3 Dock, Kowloon	264	49′ 3″	14′	7′ 6″	—
Patent Slip, No. 1, Kowloon	240	60′	14′	7′ 6″	—
Patent Slip, No. 2, Kowloon	220	60′	12′	7′ 6″	—
TAI-KOK-TSUI					
Cosmopolitan Dock	466	85′ 6″	20′	7′ 6″	—
ABERDEEN					
Hope Dock	430	84′	23′	7′ 6″	—
Lamont Dock	333	64′	16′	7′ 6″	—

The DOCKS are fitted with every appliance in the way of Caissons, powerful Centrifugal Steam Pumps, etc., which enable them to be pumped out in three hours.

WORKSHOPS.—The extensive workshops on the premises at Kowloon, Cosmopolitan, and Aberdeen Docks possess every facility and appliance necessary for the repairs of ships and steam machinery. The Engineers' Shops are supplied with a large plant of the latest types of tools in the way of Lathes, Planing, Milling and Screwing Machines, Electric Cranes .etc., etc., and capable of executing the largest class of work with despatch. The Shipwrights' Department has attached to it a Steam-Sawmill with Circular, Vertical and Band Saws, and also a complete plant of Wood-working Machinery of the most modern and improved type. The Blacksmiths' Shops are equally well furnished with a complete supply of powerful Steam Hammers, Cranes, etc., capable of forging stern posts and crank and straight shafting of the largest size.

Powerful Lifting Shears with steam purchase at two of their Establishments stand on a solid granite seawall, alongside which vessels can lie drawing 24 feet of water, and take in or out boilers, etc. The Shears at Kowloon are capable of lifting 70 tons.

The Company is prepared to tender for the construction of new vessels in either steel, iron or wood, having already built about 400 of varying sizes up to 3,000 tons; also to execute all kinds of ship work at lower rates and with greater despatch than any establishment in the East. Every department is under the close supervision of experienced European foremen.

SHIP-YARD is fully equipped with modern plant, including hydraulic flanging and bending machines, electrically driven rolls, punching, shearing, angle-bevelling, joggling and planing machines, capable of dealing with the heaviest class of work.

BOILER-MAKERS' DEPARTMENT.—The Company, in addition to executing repairs, is prepared to tender for new boilers to steamships for the construction of which it possesses special facilities, including powerful punching and shearing machines, hydraulic rivetters, etc.

FOUNDRY.—The Foundry is fitted with a large powerful Steam Crane and the Cupolas are capable of casting up to 100 tons. The Company is prepared to supply the very best iron and Brass Castings of all descriptions upon the shortest notice.

GALVANIZING PLANT of the most modern type by electrical deposit has been put up at the Kowloon Establishment, which is capable of doing the largest class of work.

STORES.—The Company's Godowns contain large and well-selected stocks of all material and fittings requisite in shipbuilding, engine-room outfits, furnishings, and ships' stores of all descriptions supplied at tariff rates.

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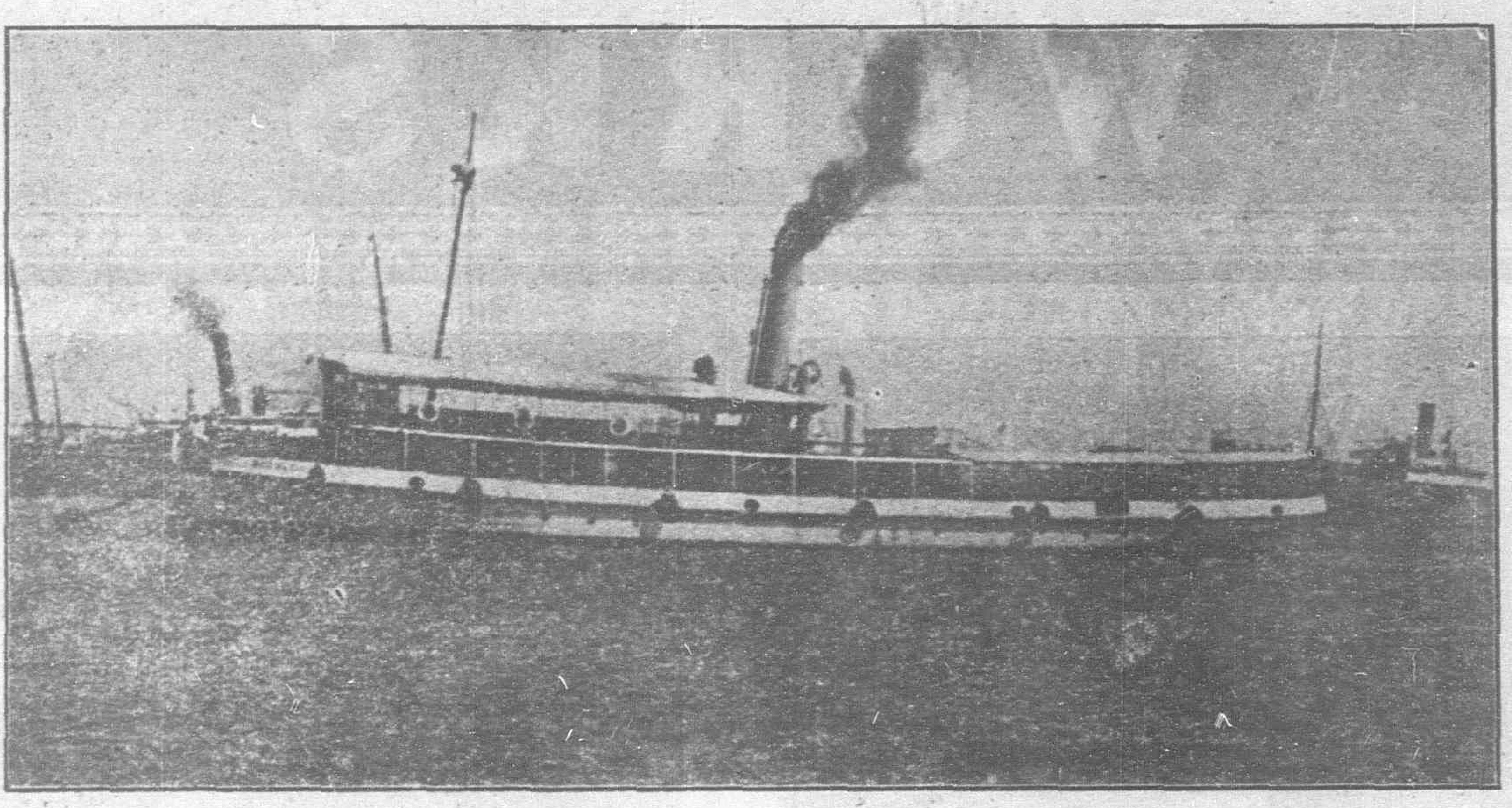
(Late S. C. Farnham, Boyd & Co., Ltd.)

SHANGHAI, CHINA

Dock Owners, Engineers, Founders, Boilermakers, Shipbuilders, and Electricians



CHINA MERCHANTS' S. N. CO.'S SCREW STEAMER "HSINKONG."

THE DOCKS

The Docks are five in number ranging in length from 360 feet to 560 feet, and breadth of entrance from 57 feet to 83 feet, with the depth of water on the sill from 16 feet to 24 feet.

The Dock charges are very moderate.

The Water Frontage is about 1½ miles in length. Wharves and Pontoons are arranged where steamers can moor during repairs; and slips for hauling up small vessels are provided. Sheer legs capable of lifting 65 tons are placed at the various Docks.

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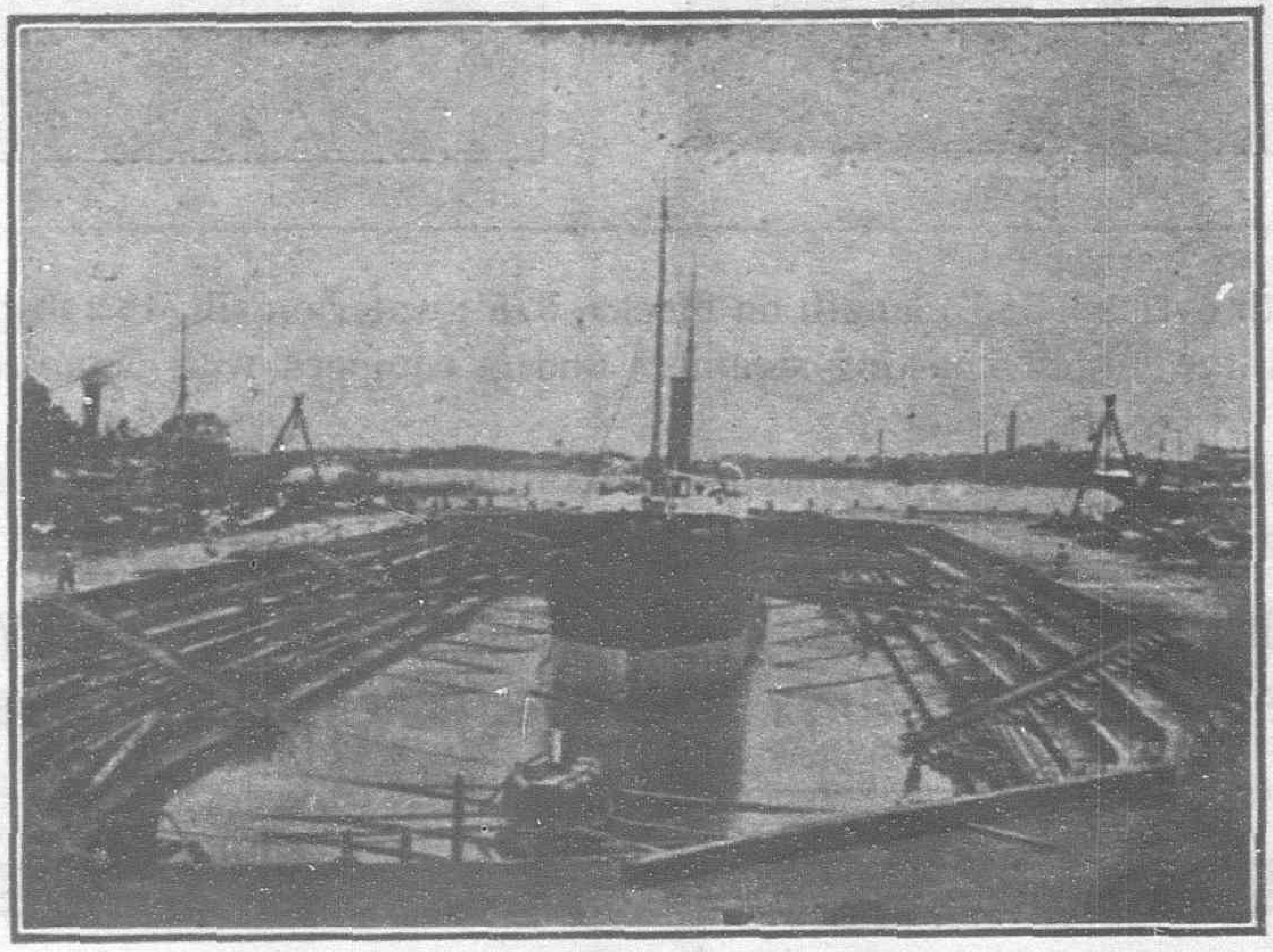
Lit up by electric light with railway lines through workshops and yards.



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OTHER WORKS

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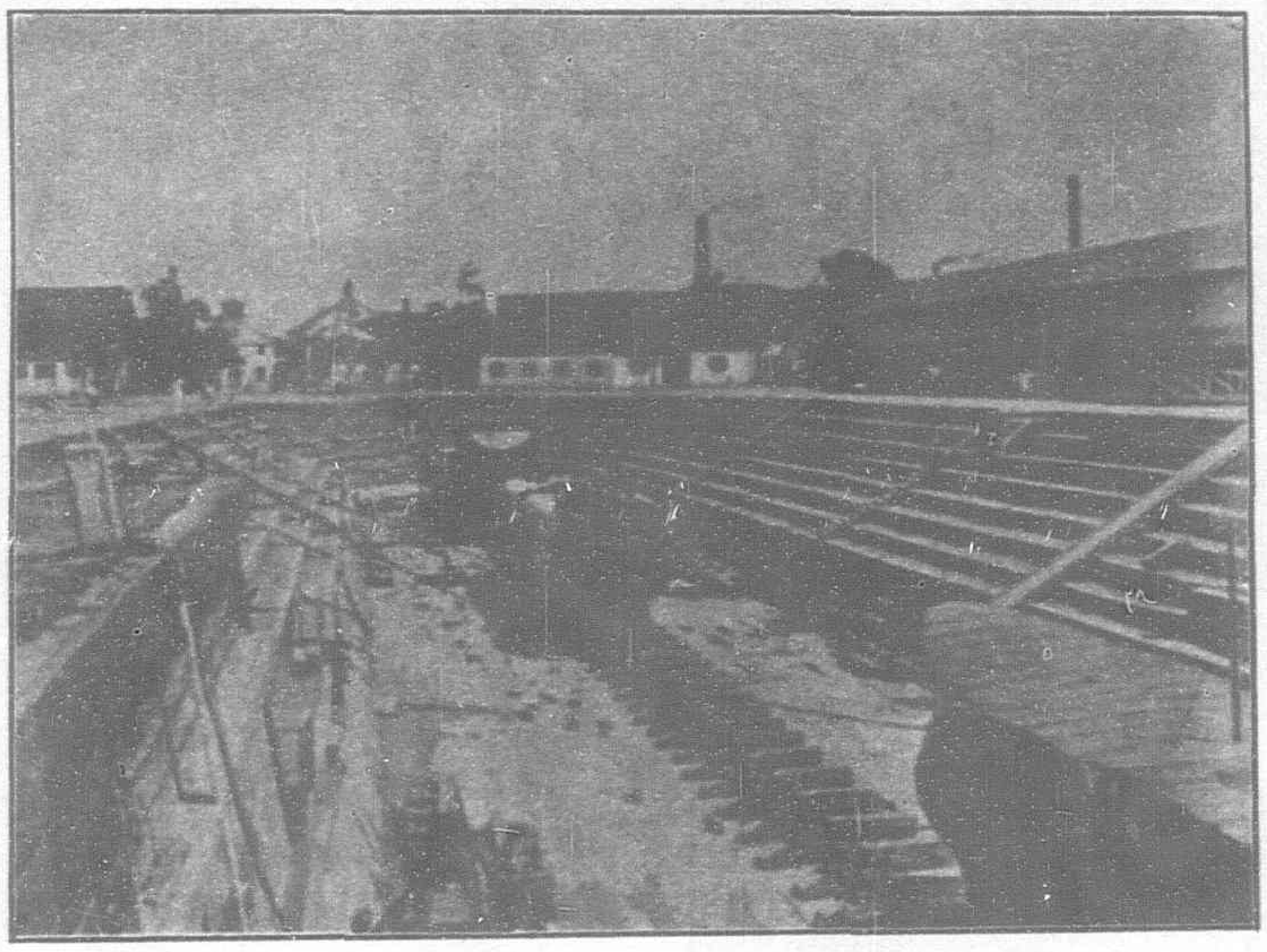

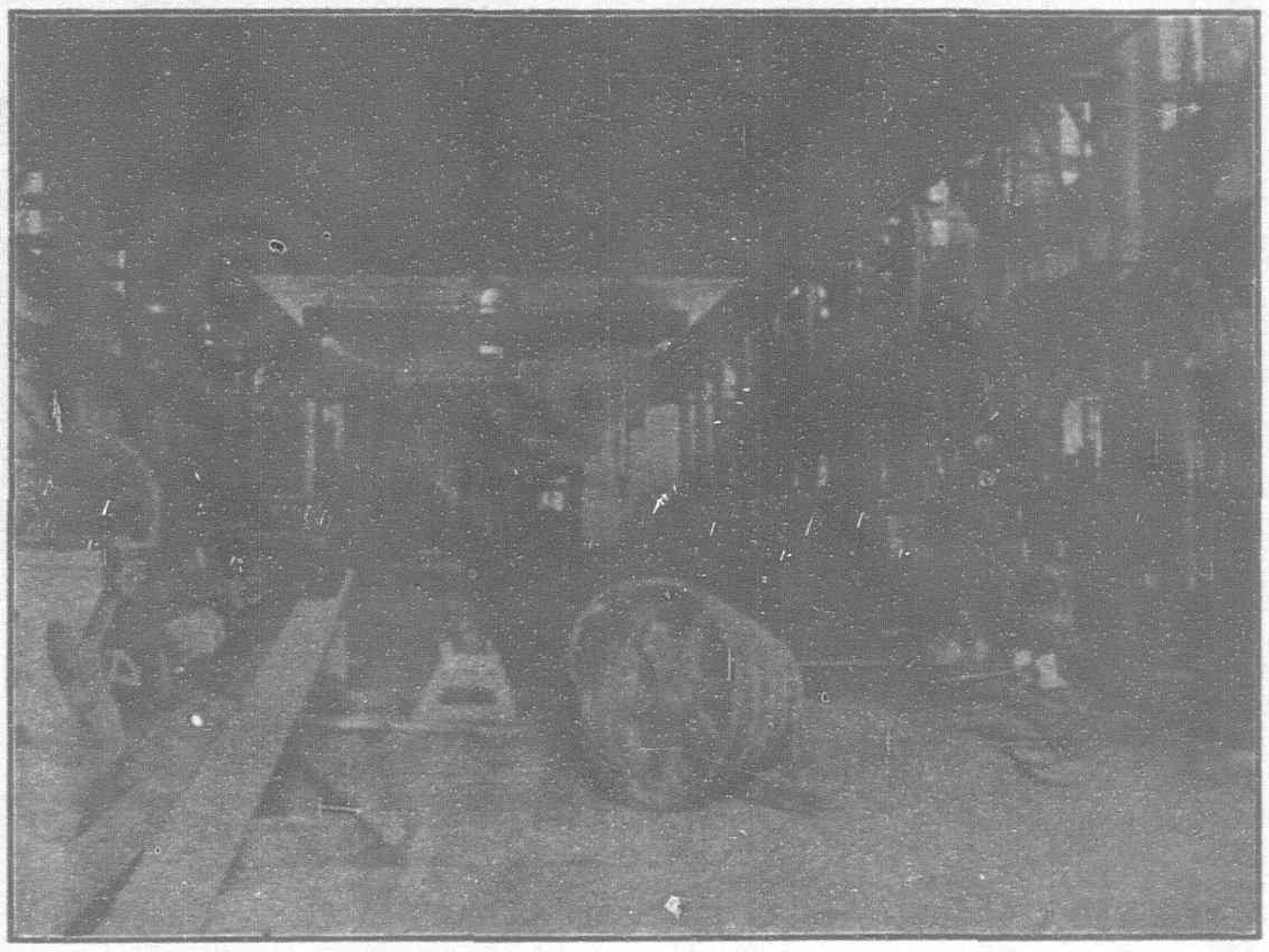

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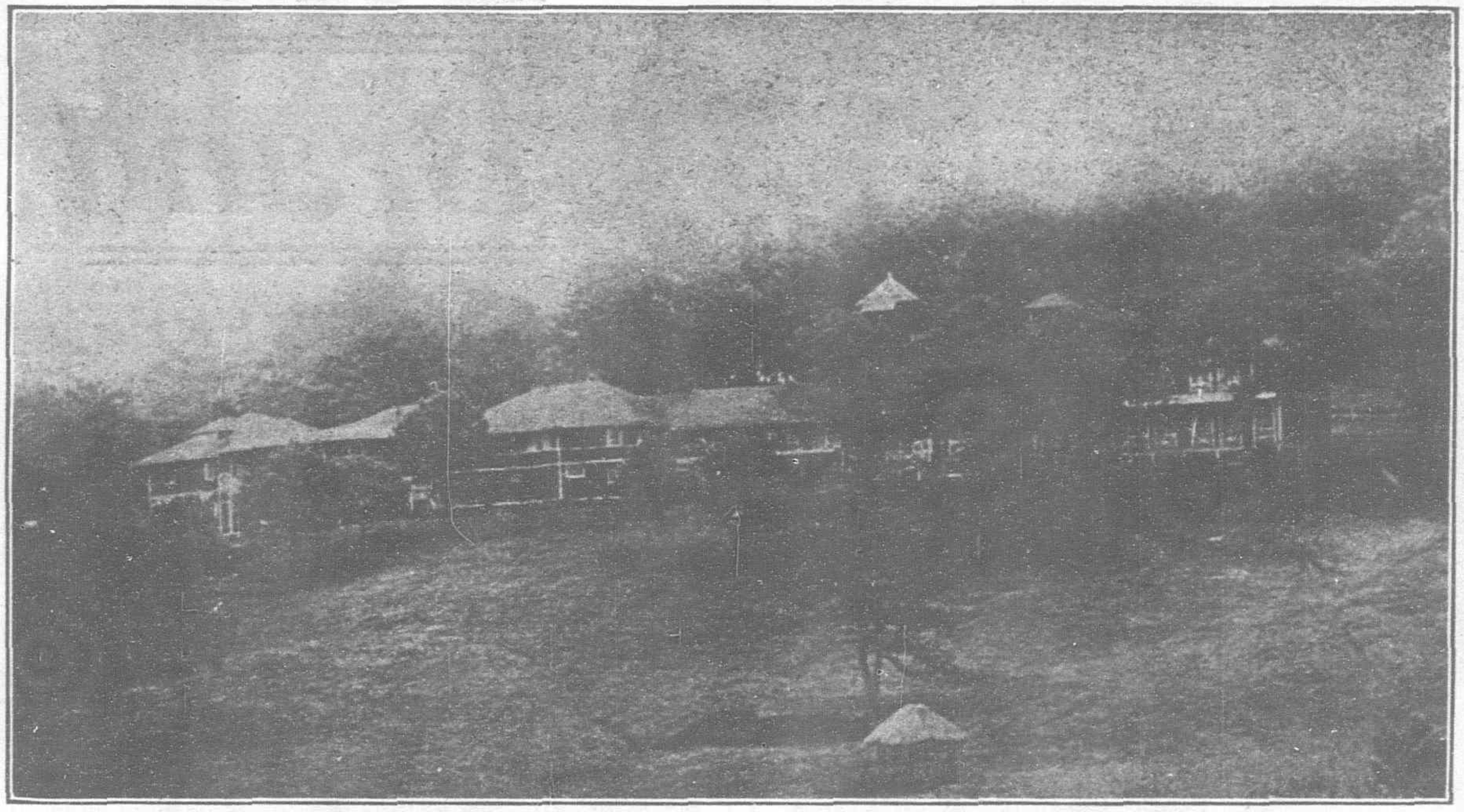

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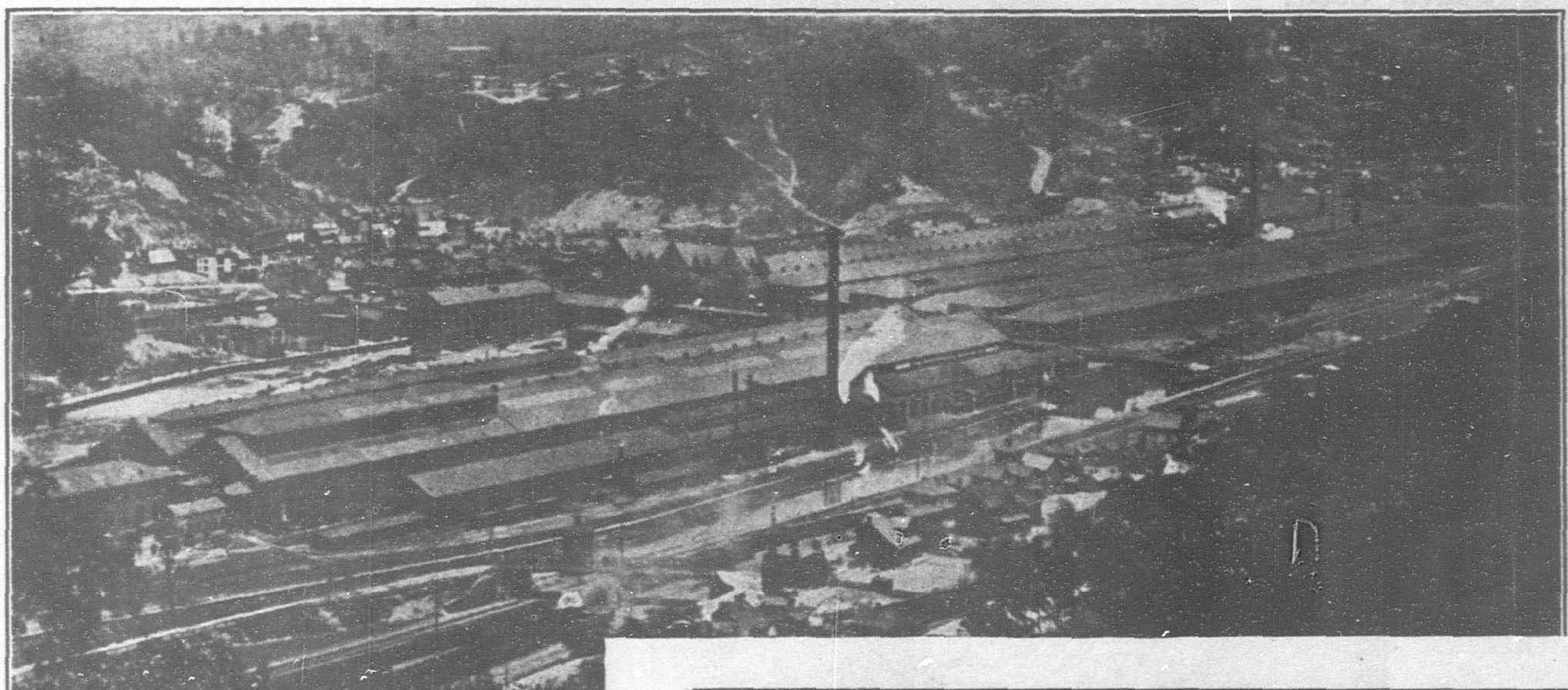

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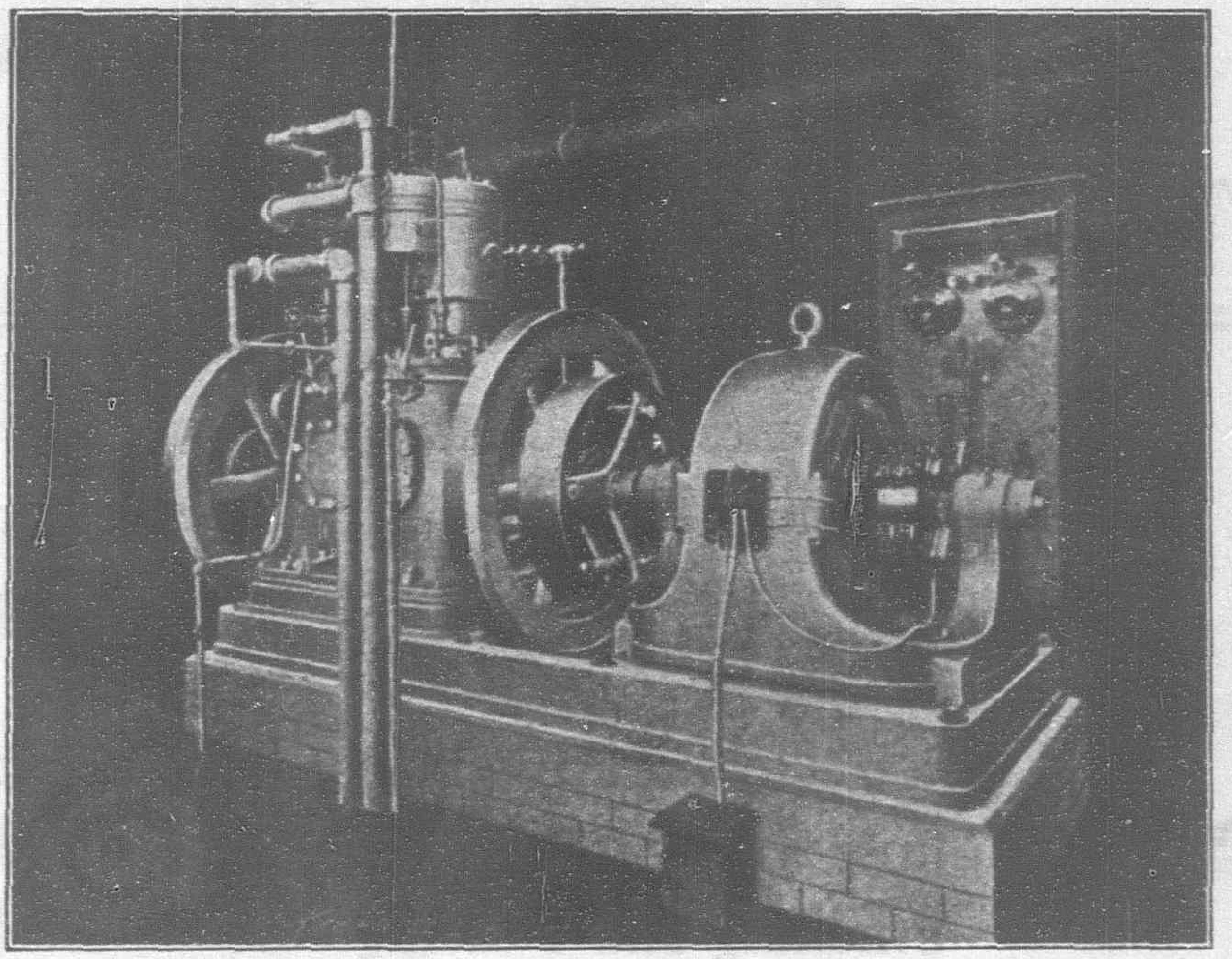

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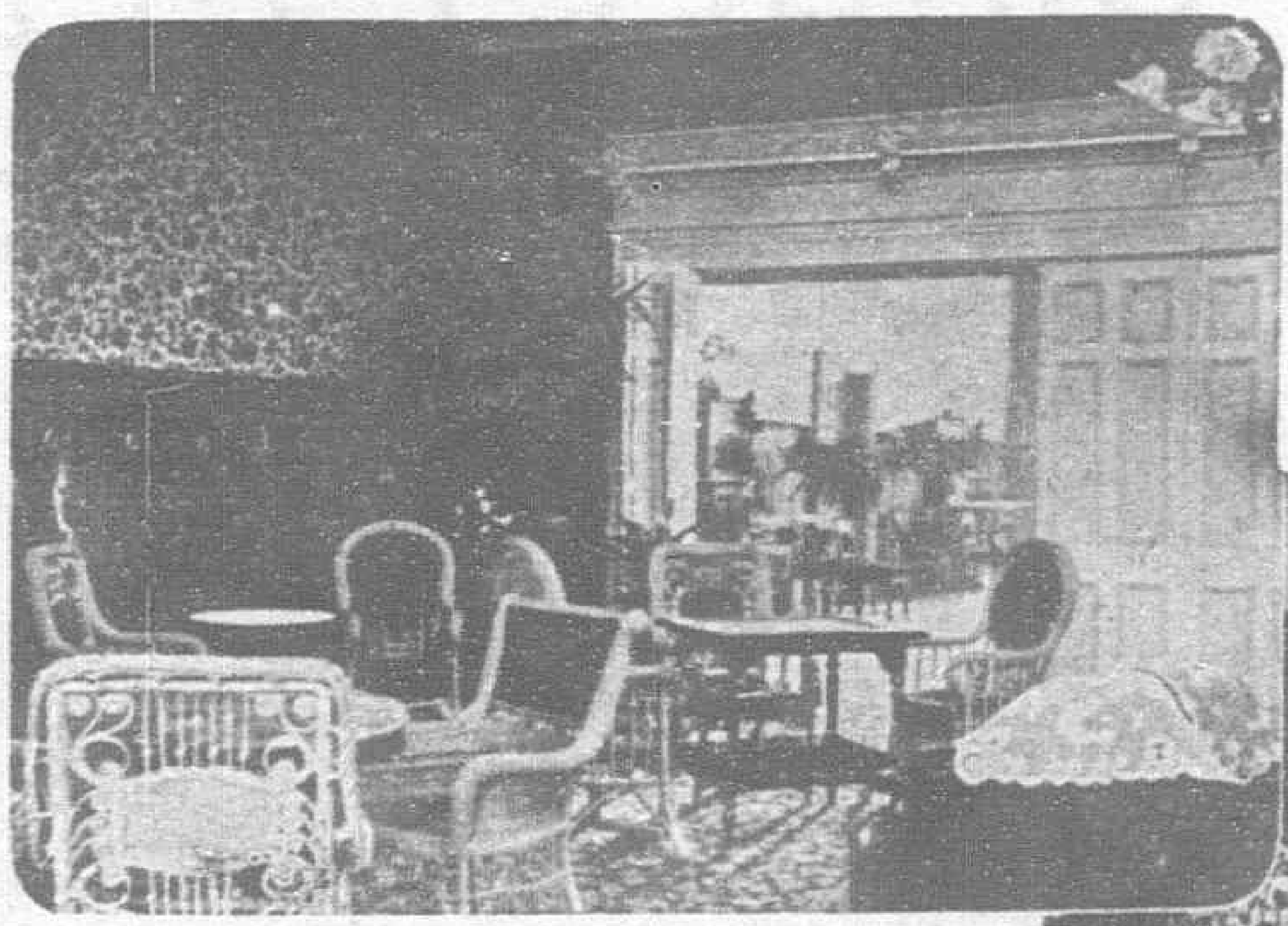

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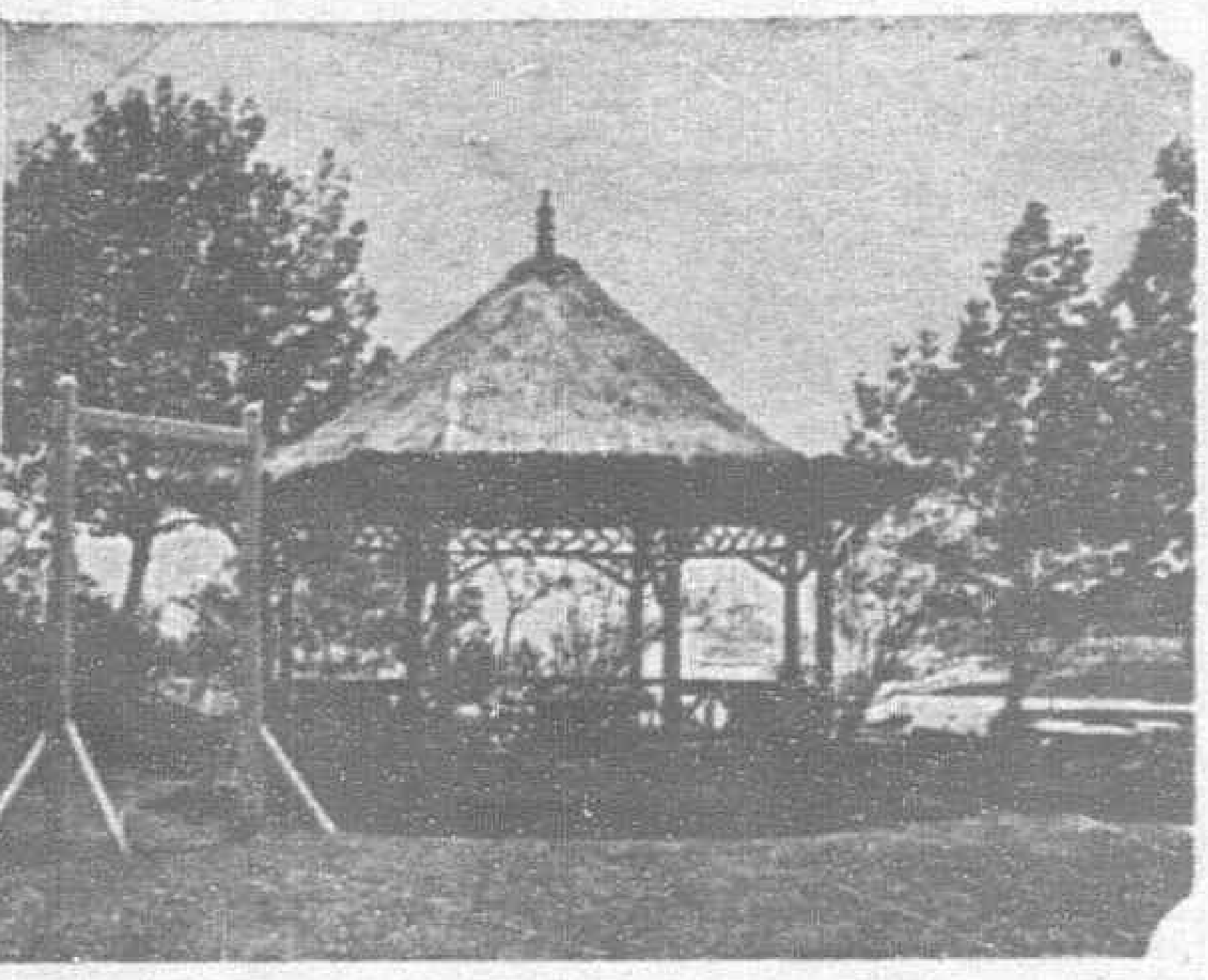

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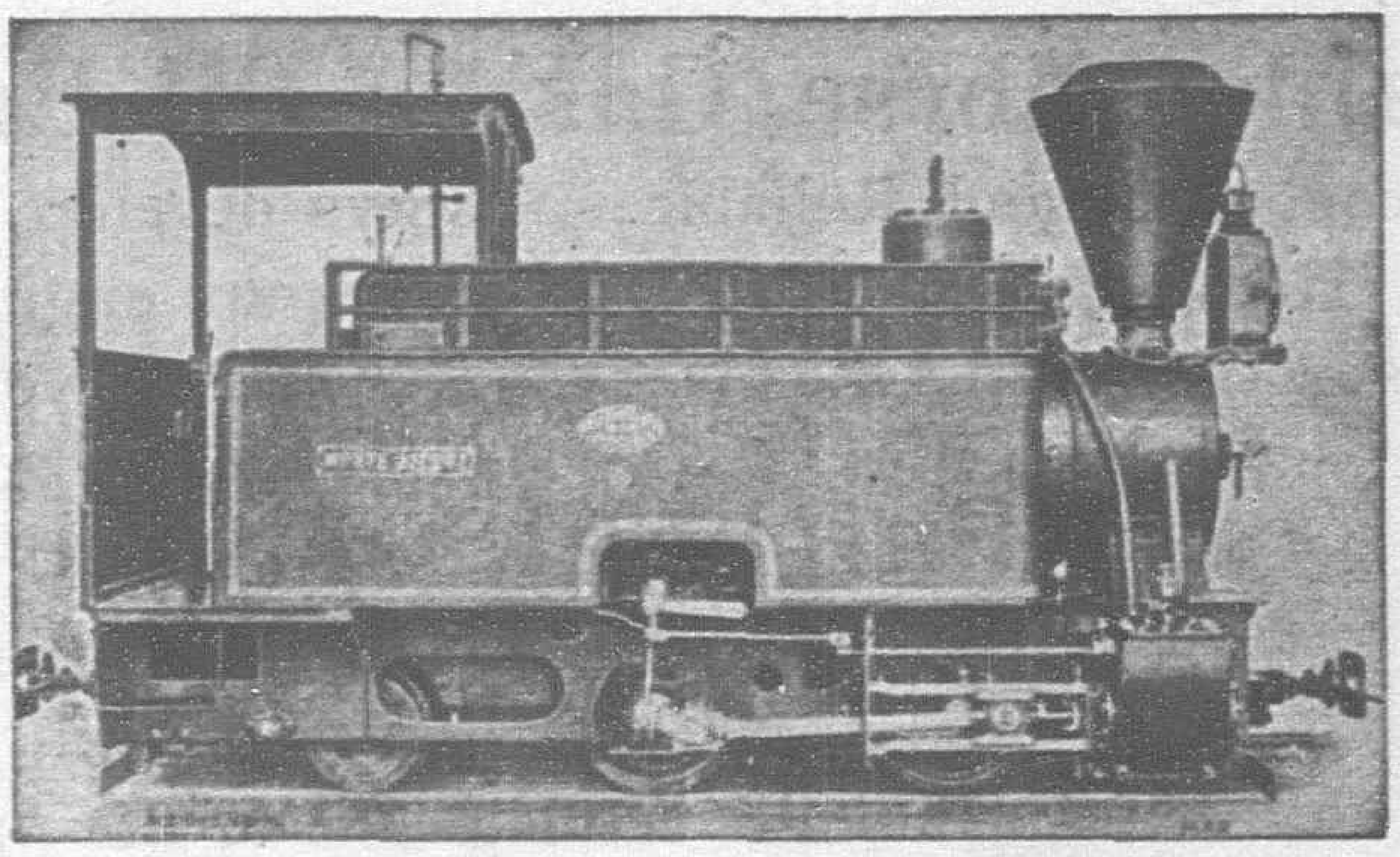

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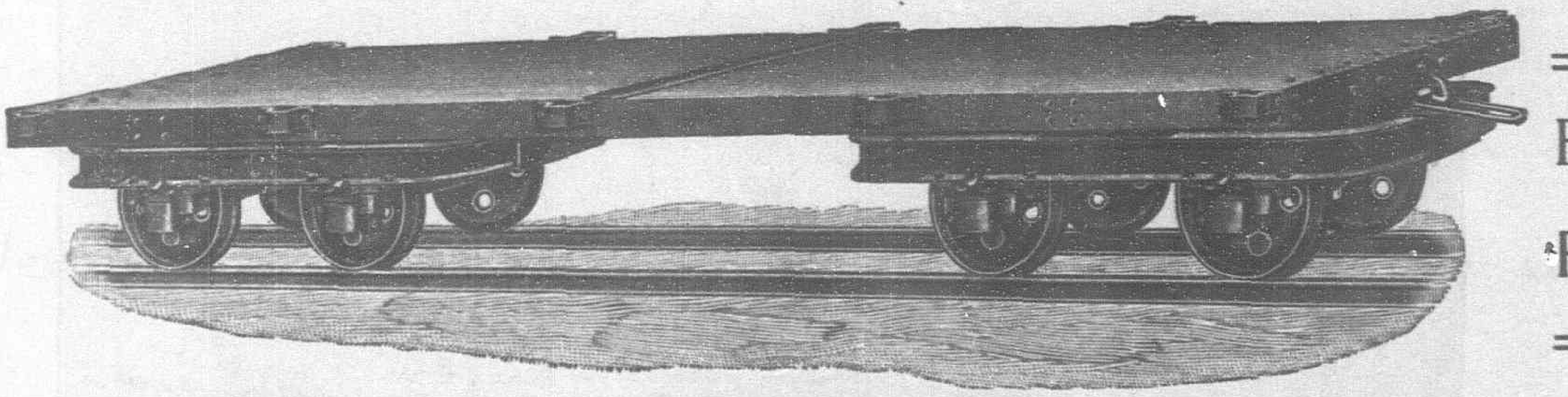

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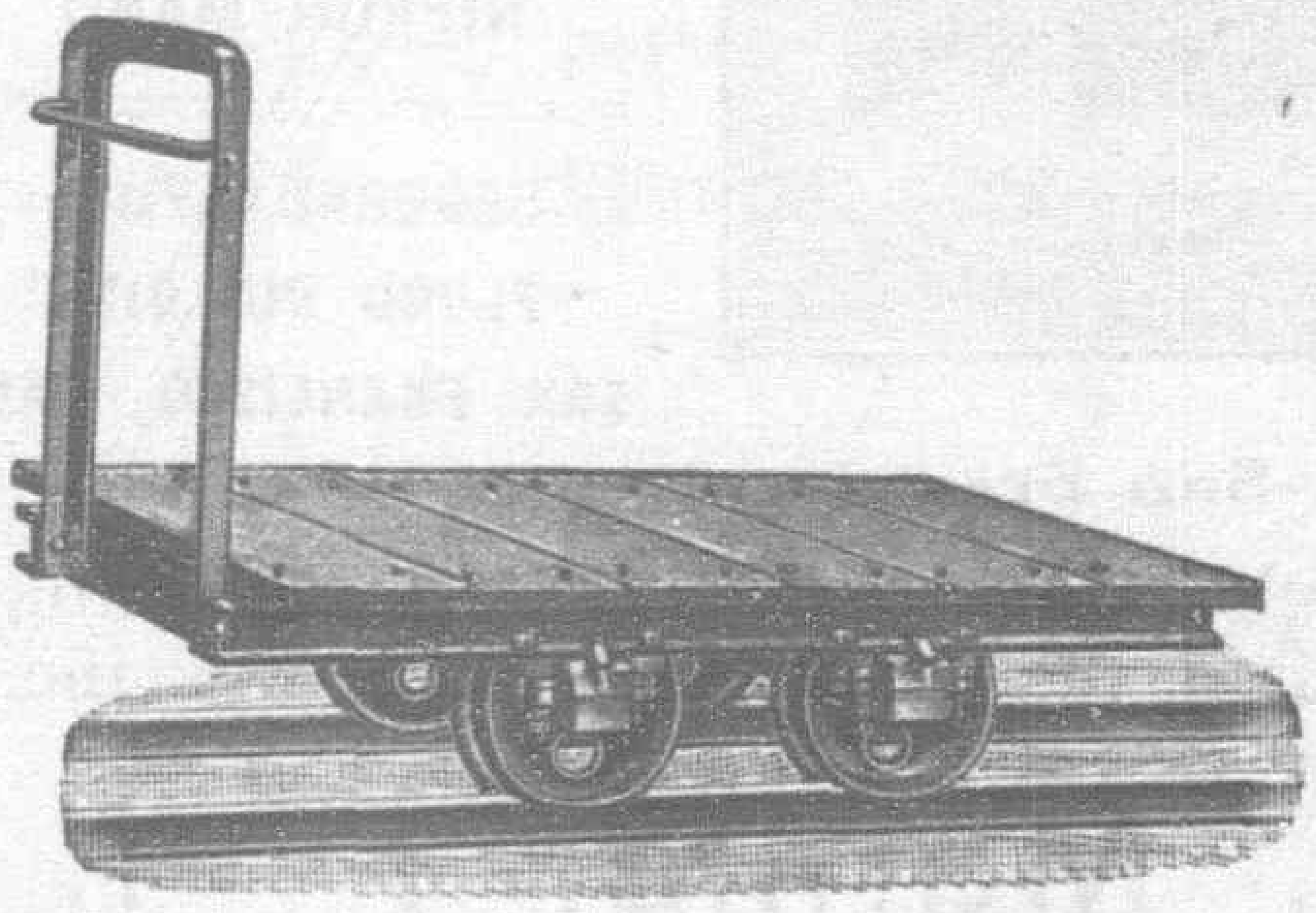

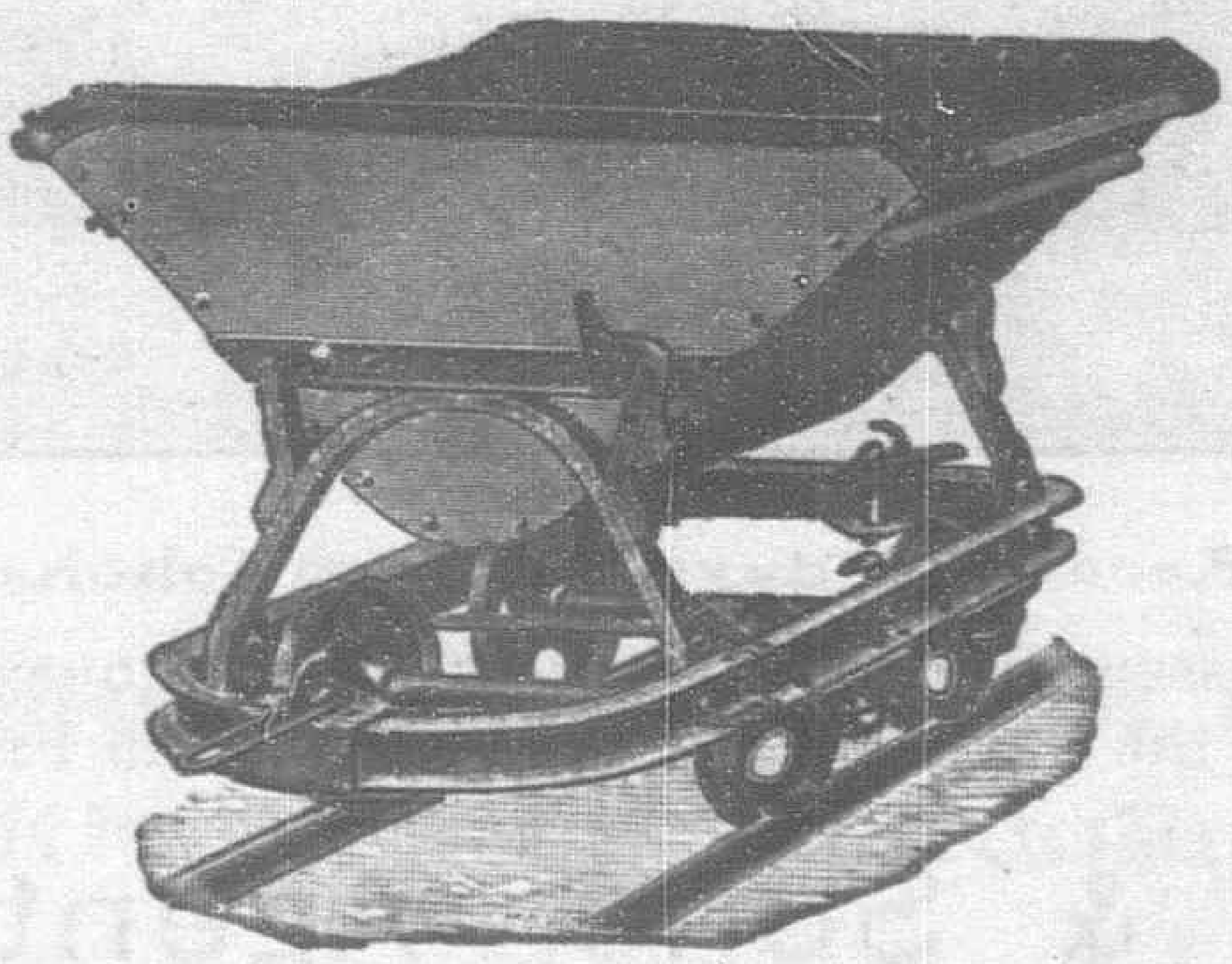

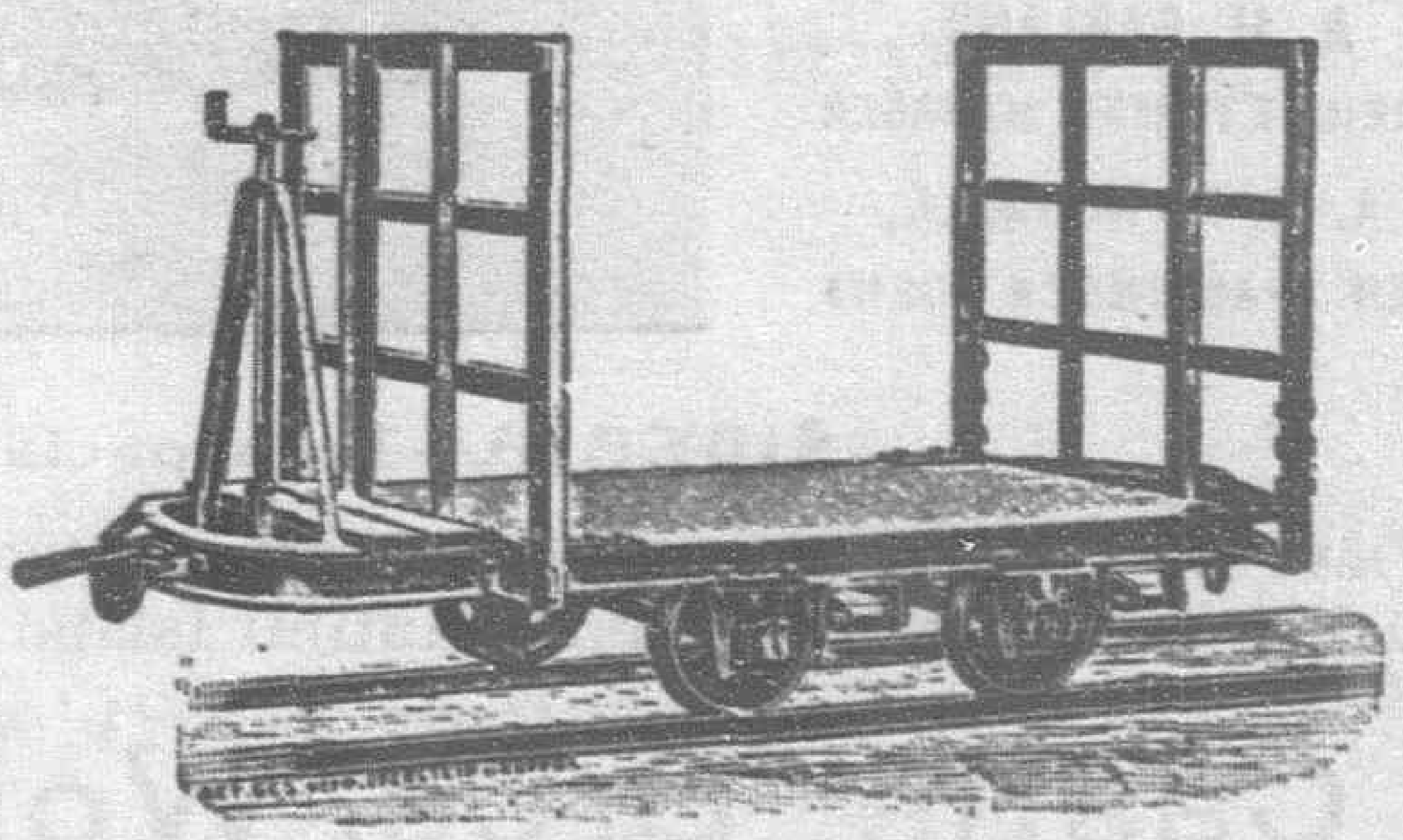

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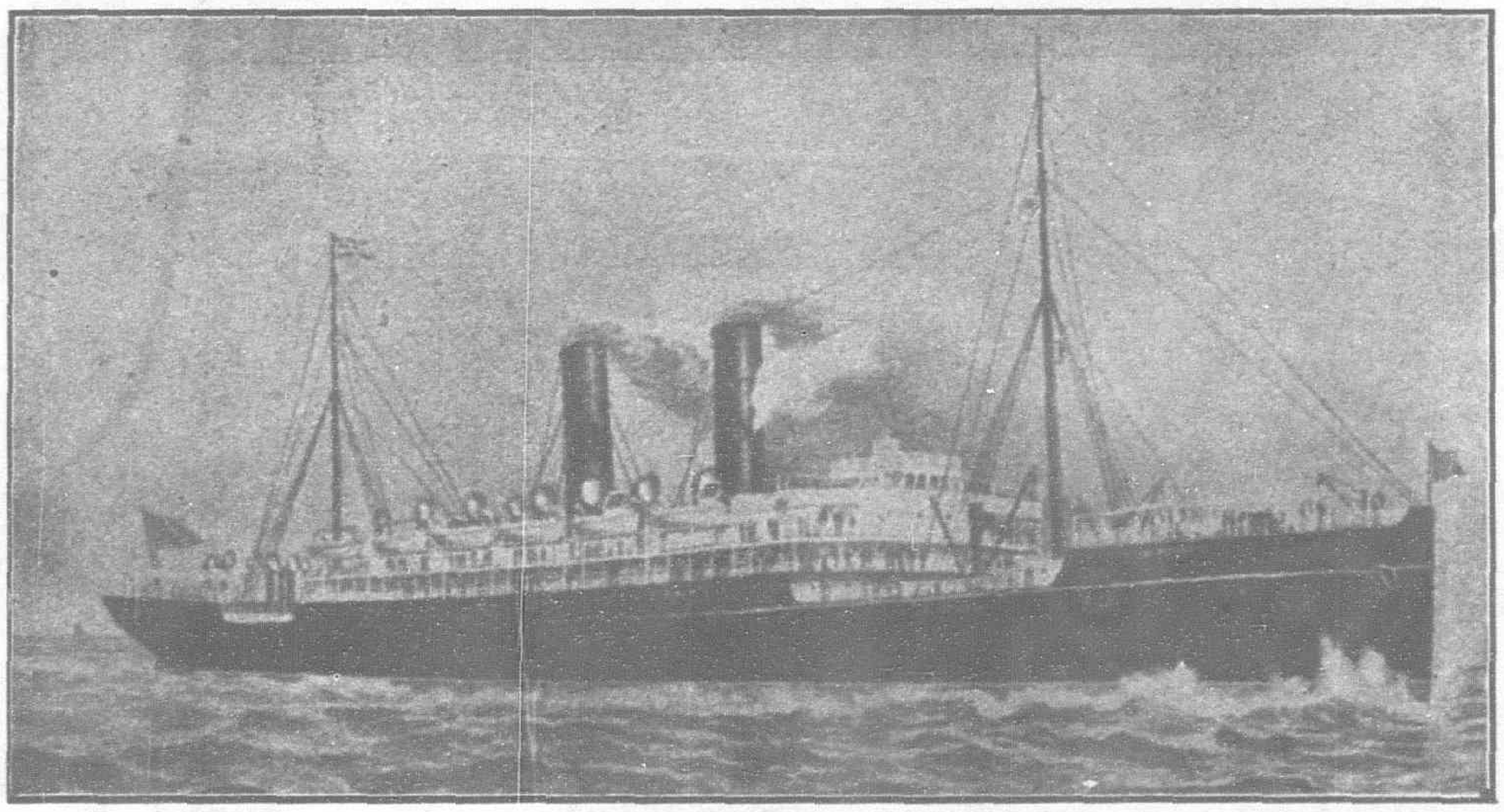

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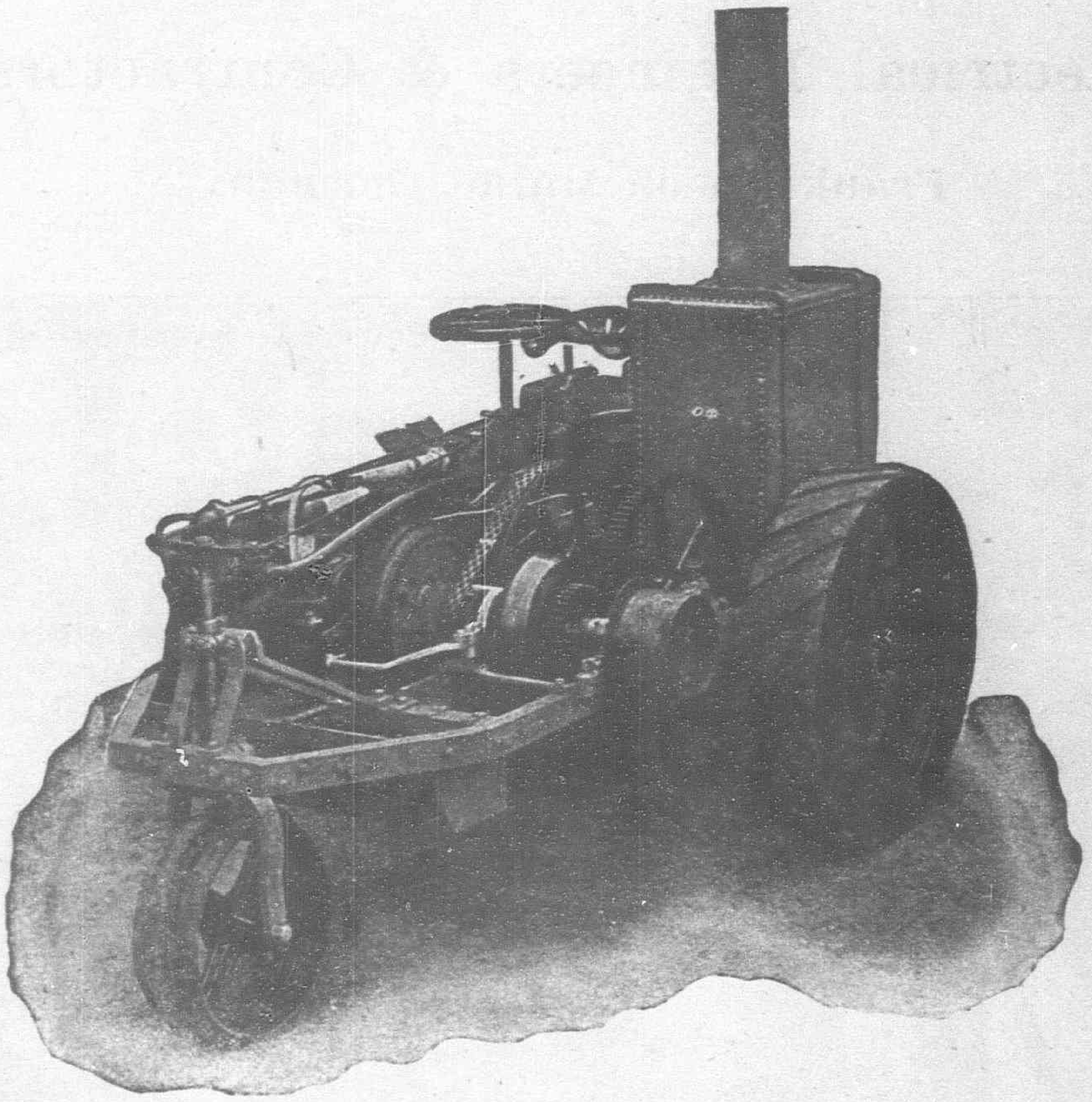

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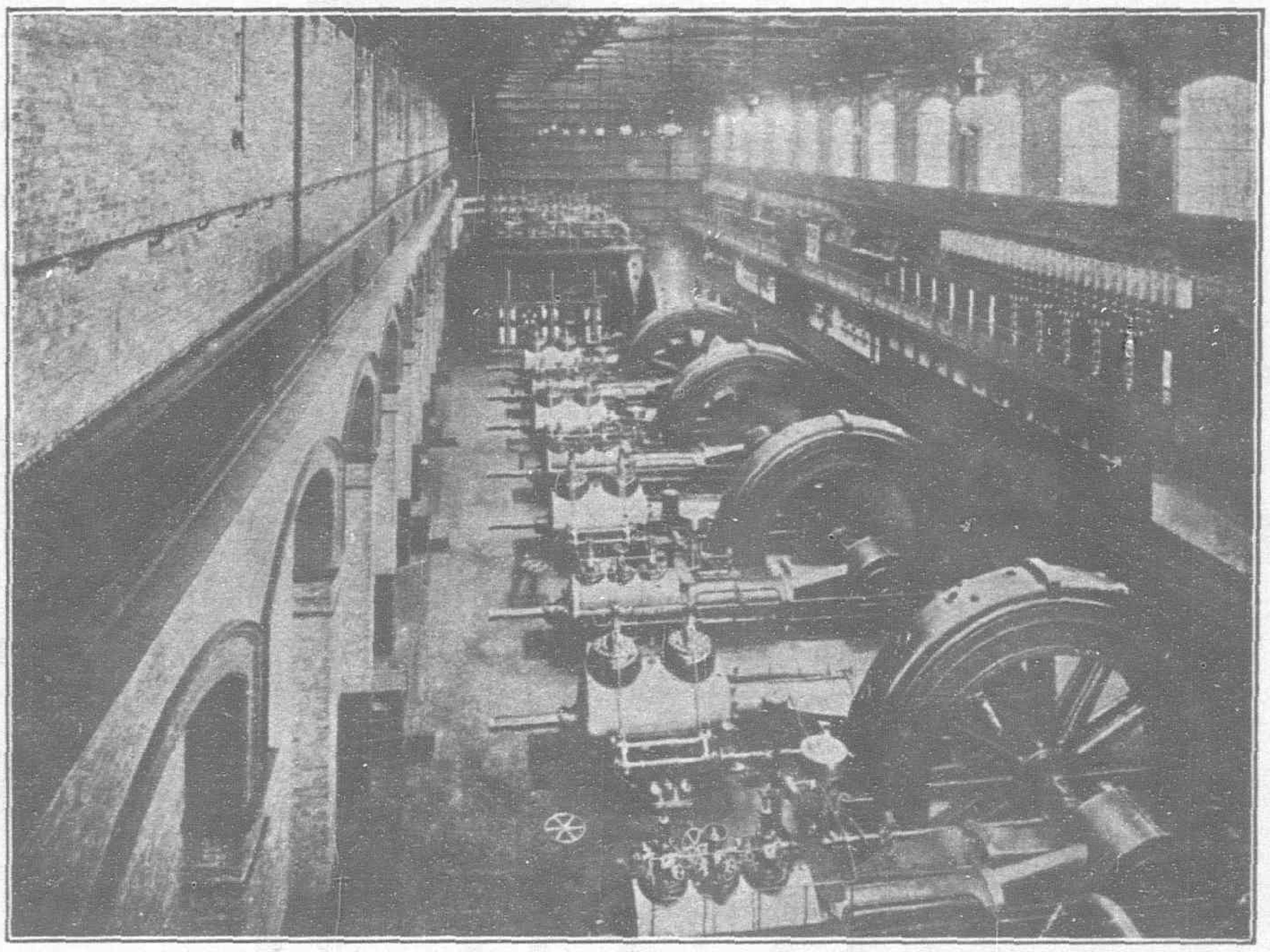

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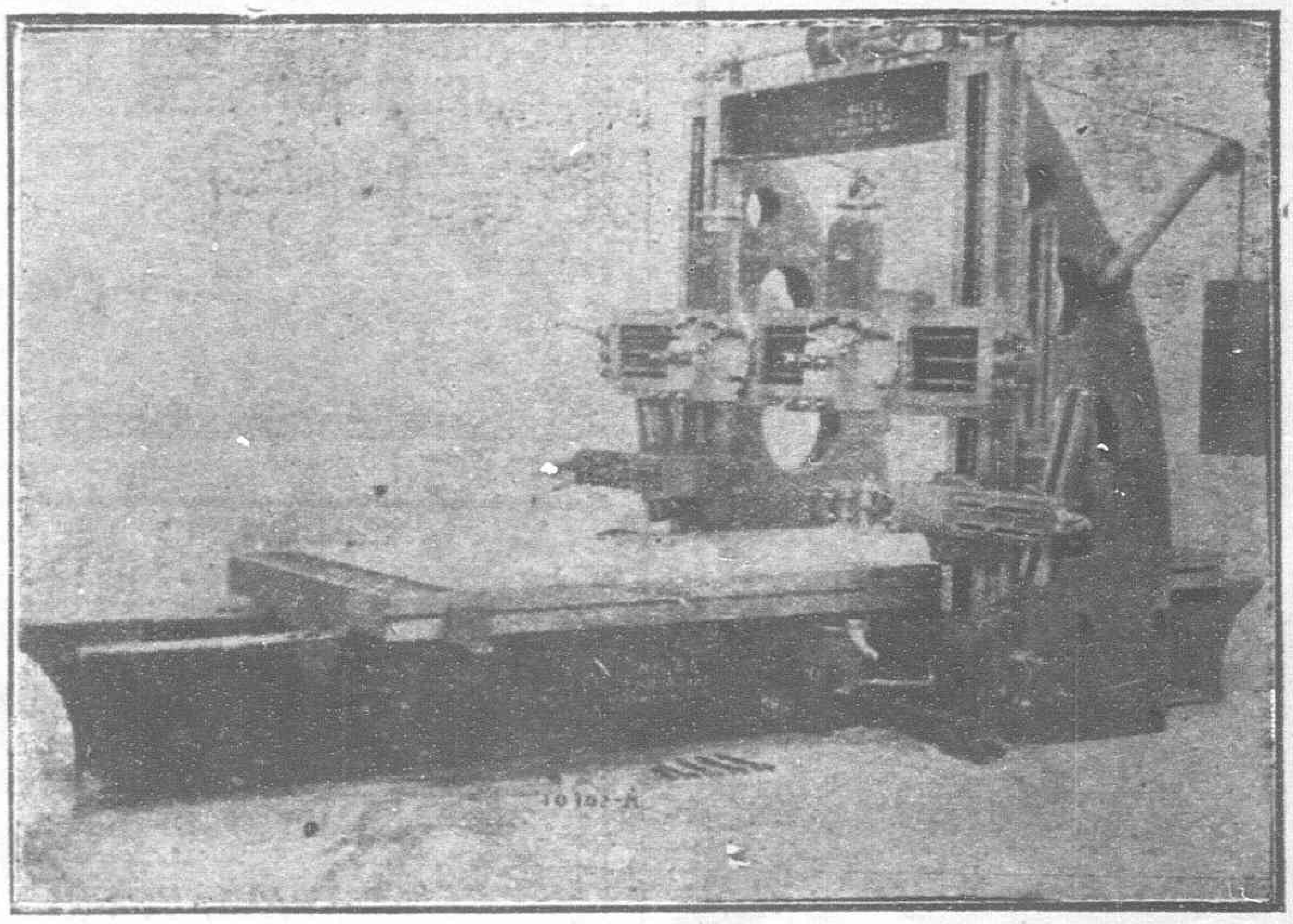

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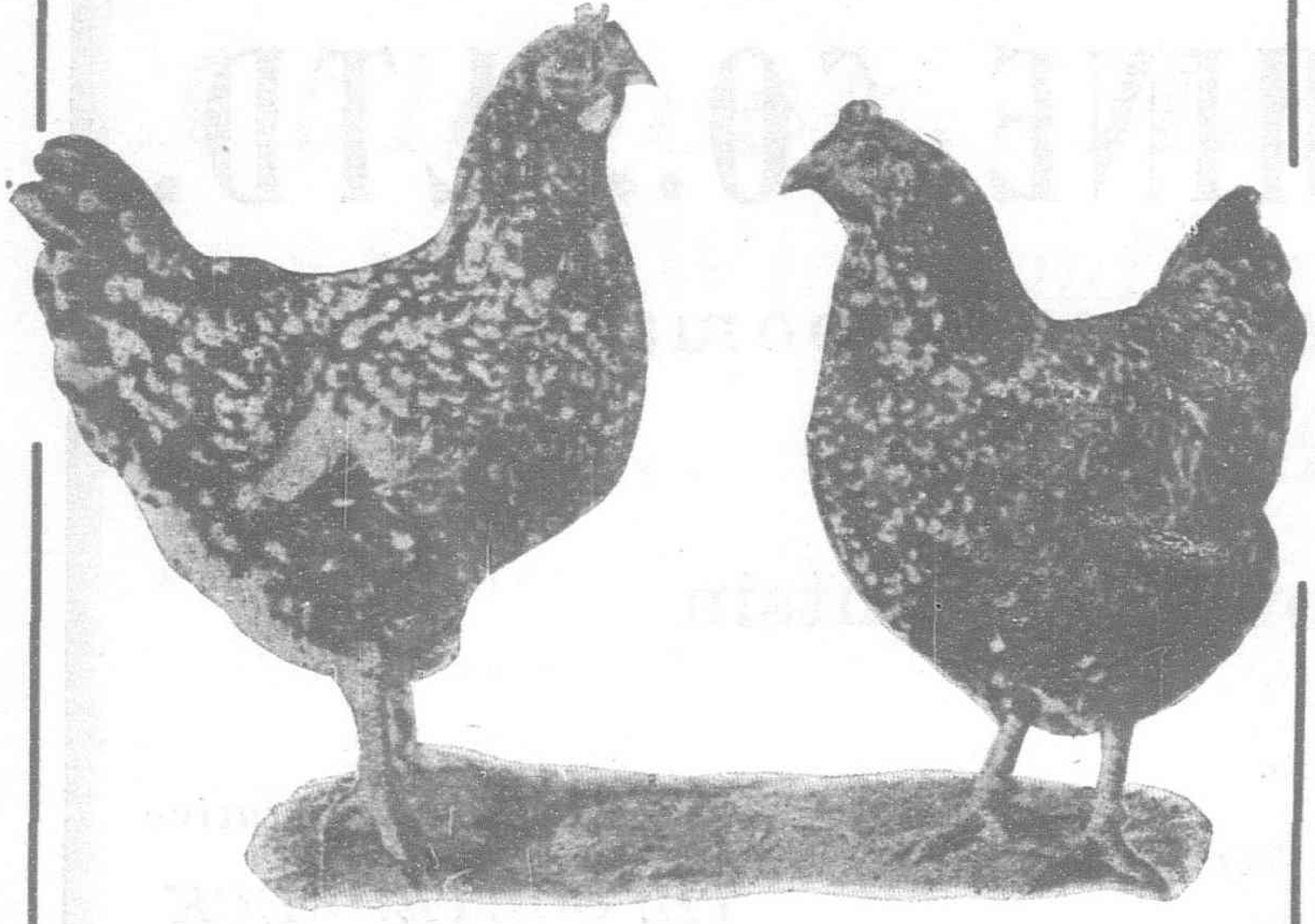

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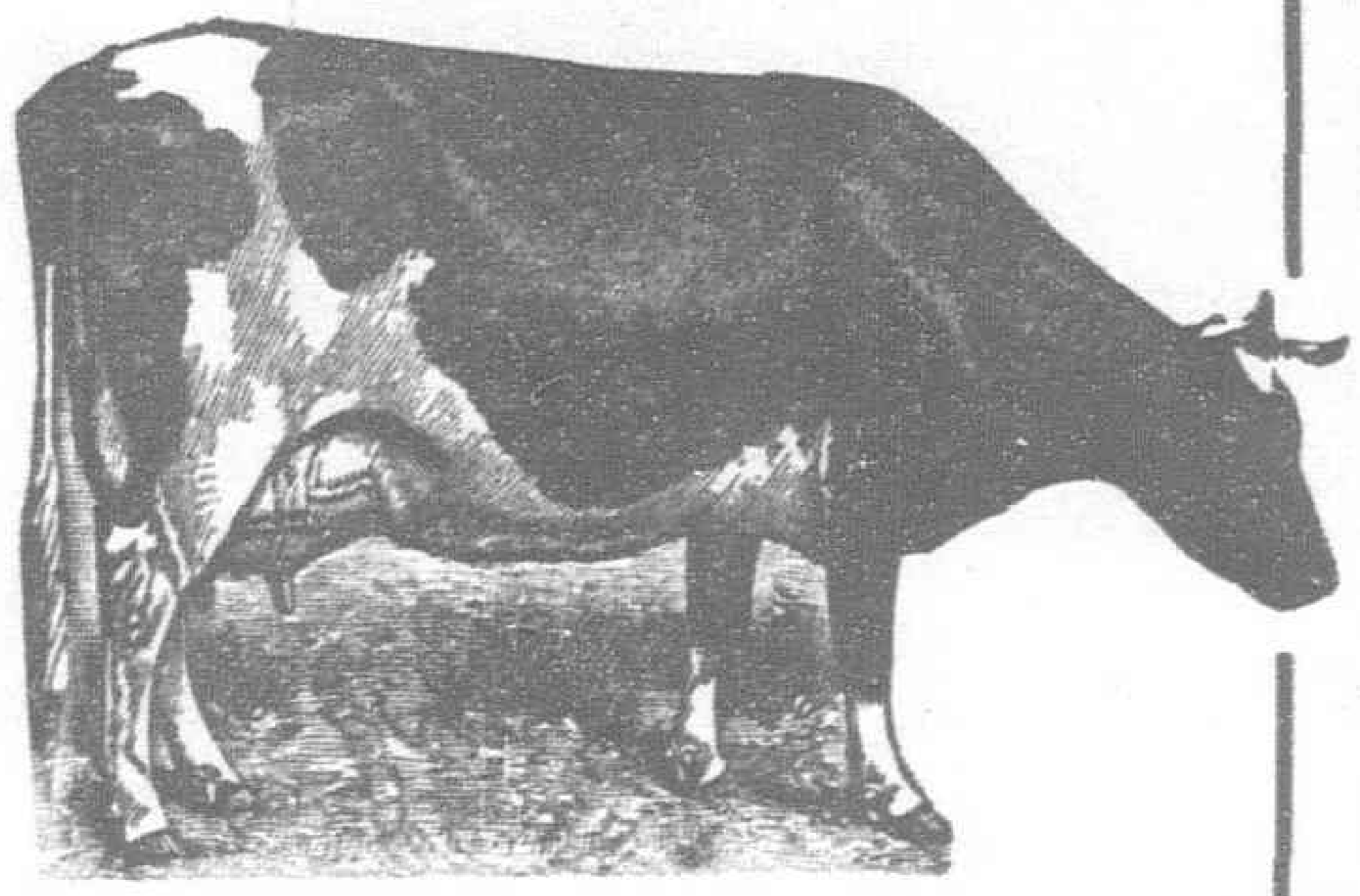

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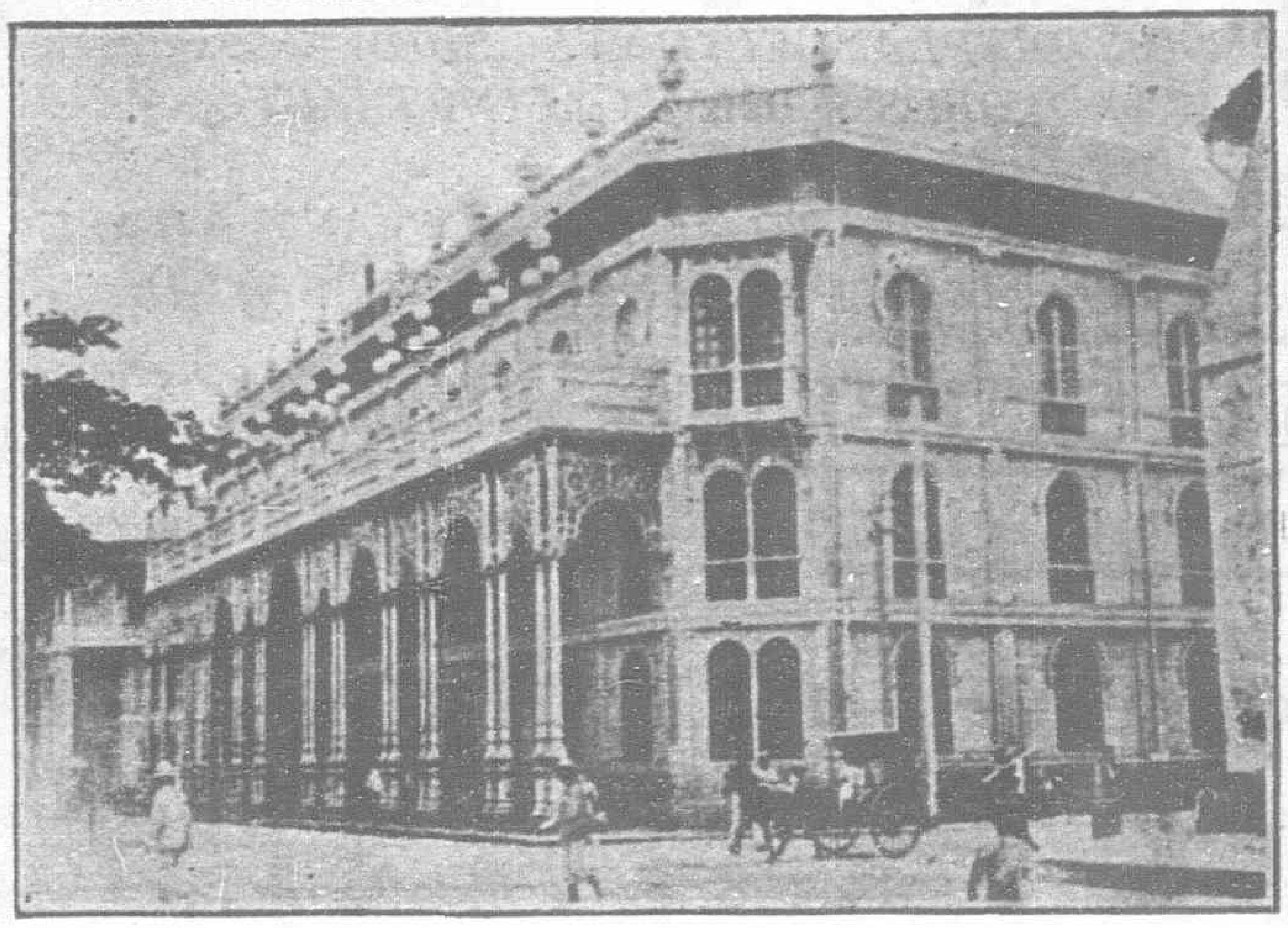

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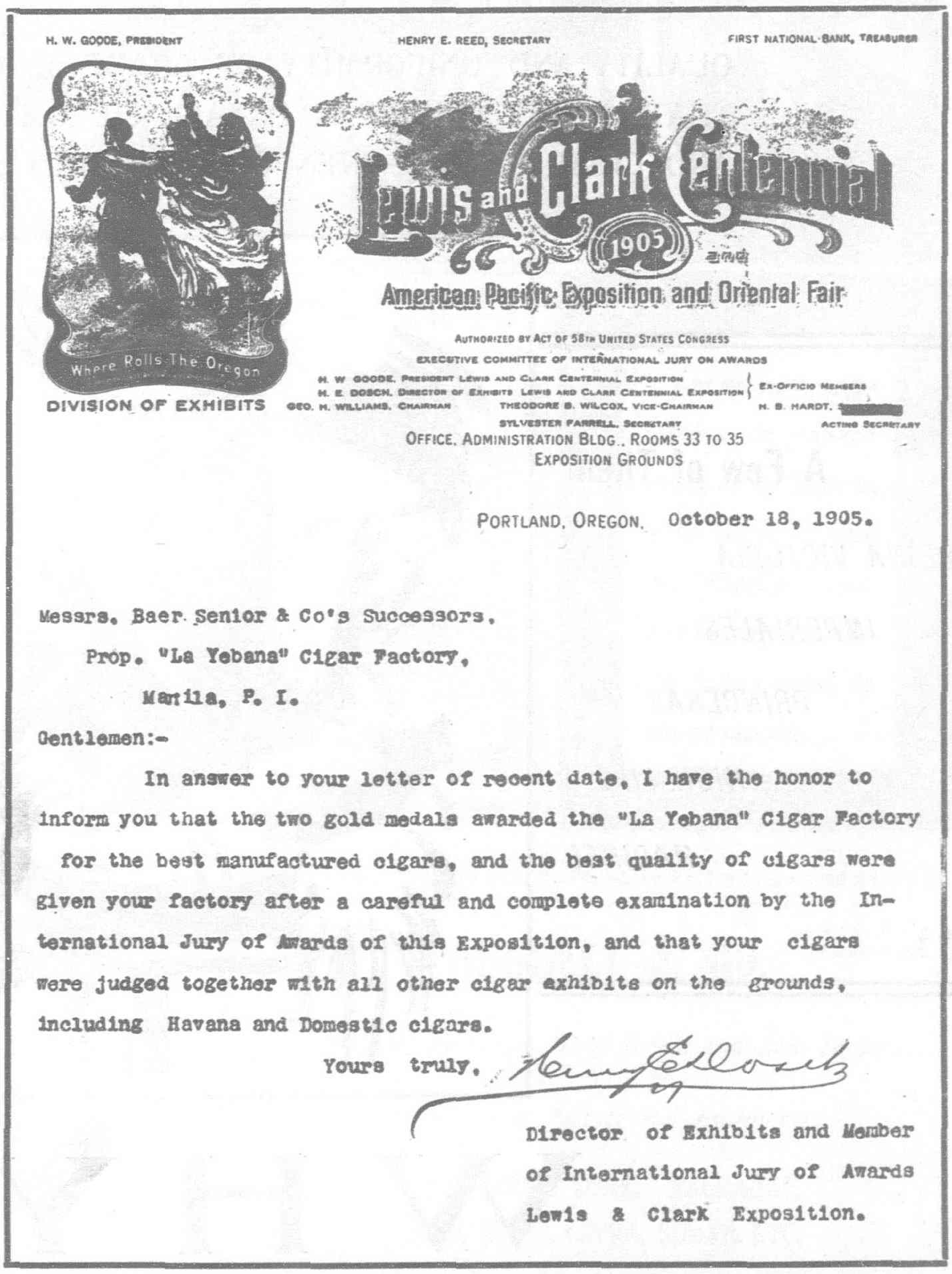

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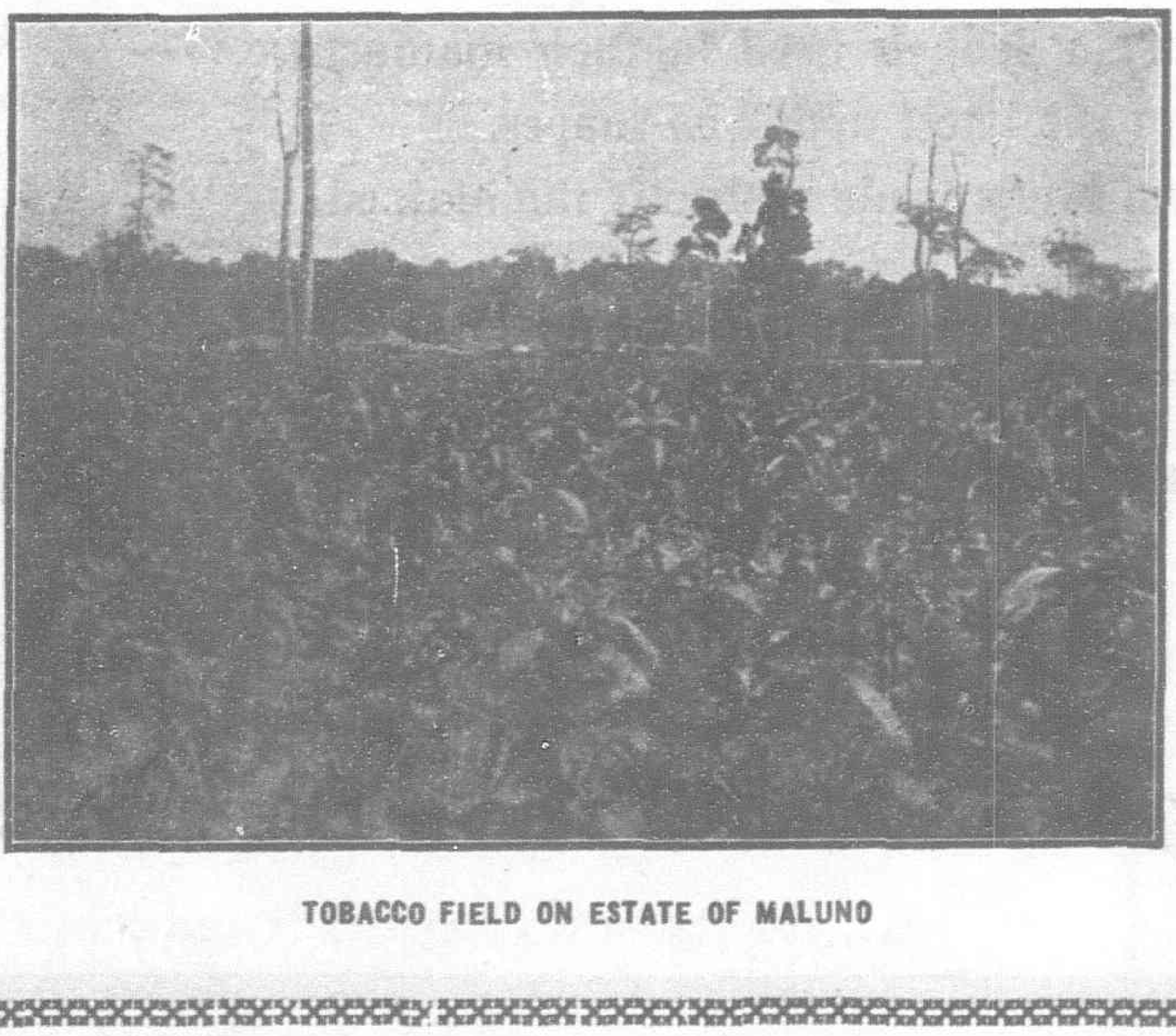

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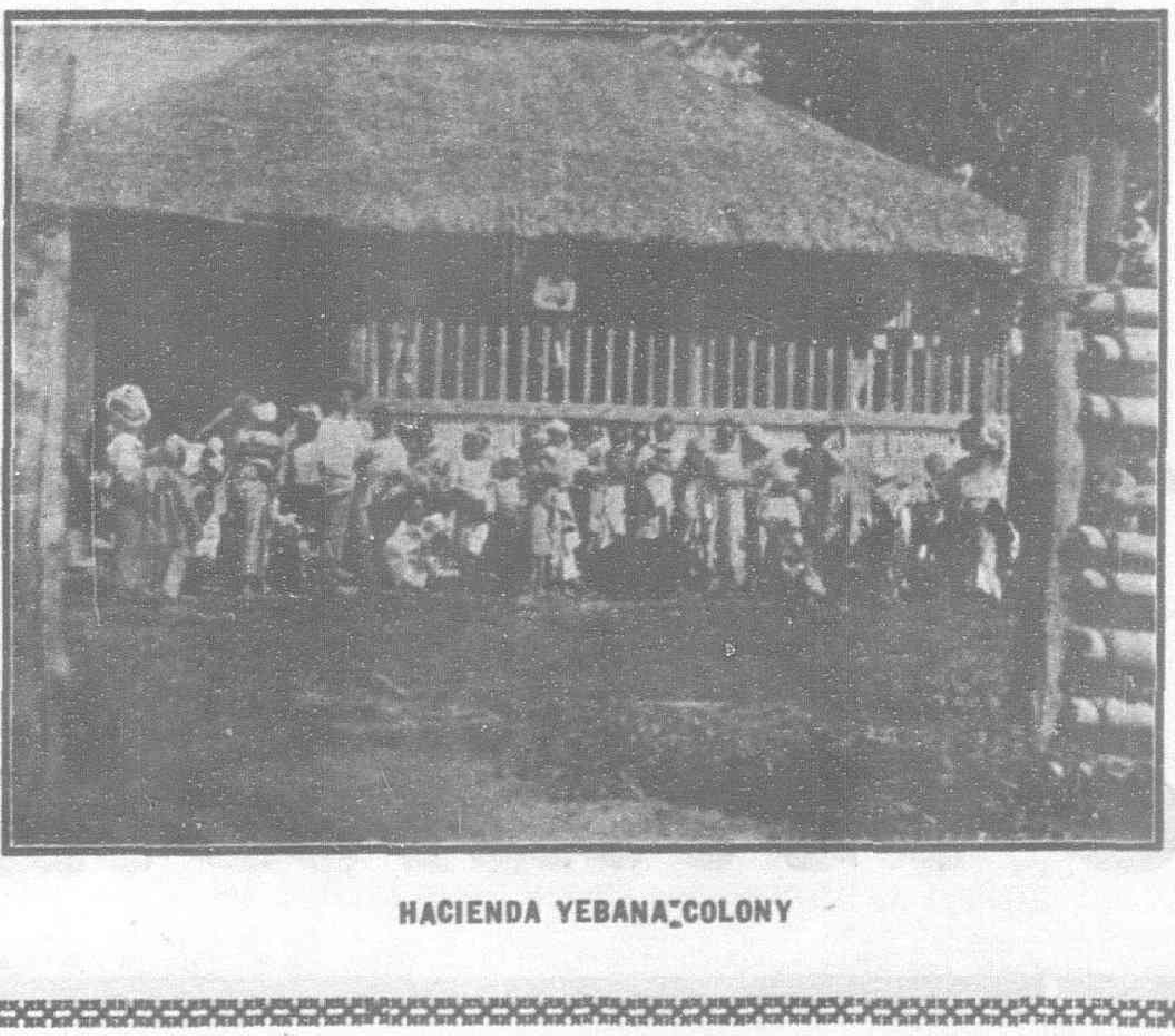

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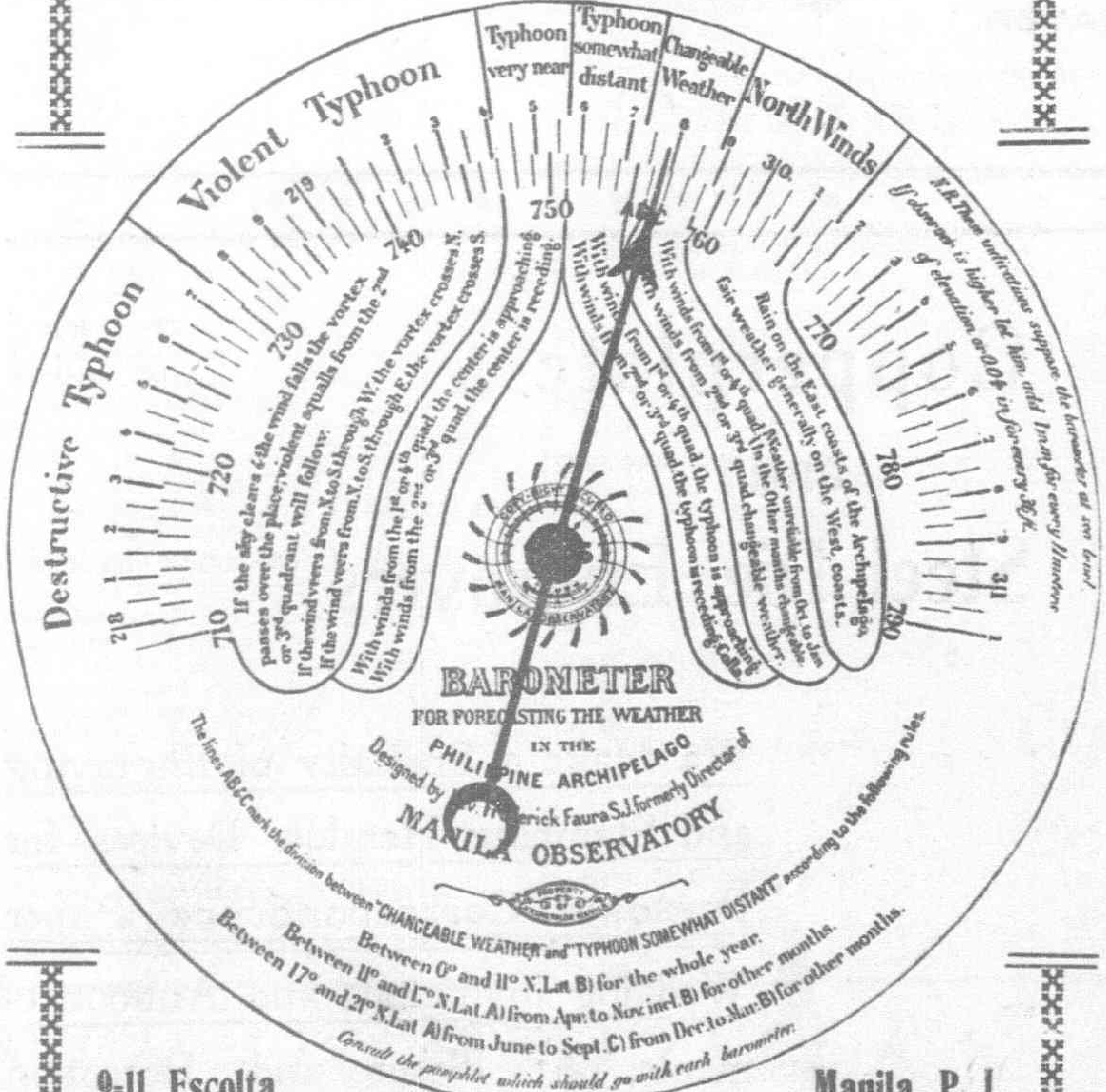
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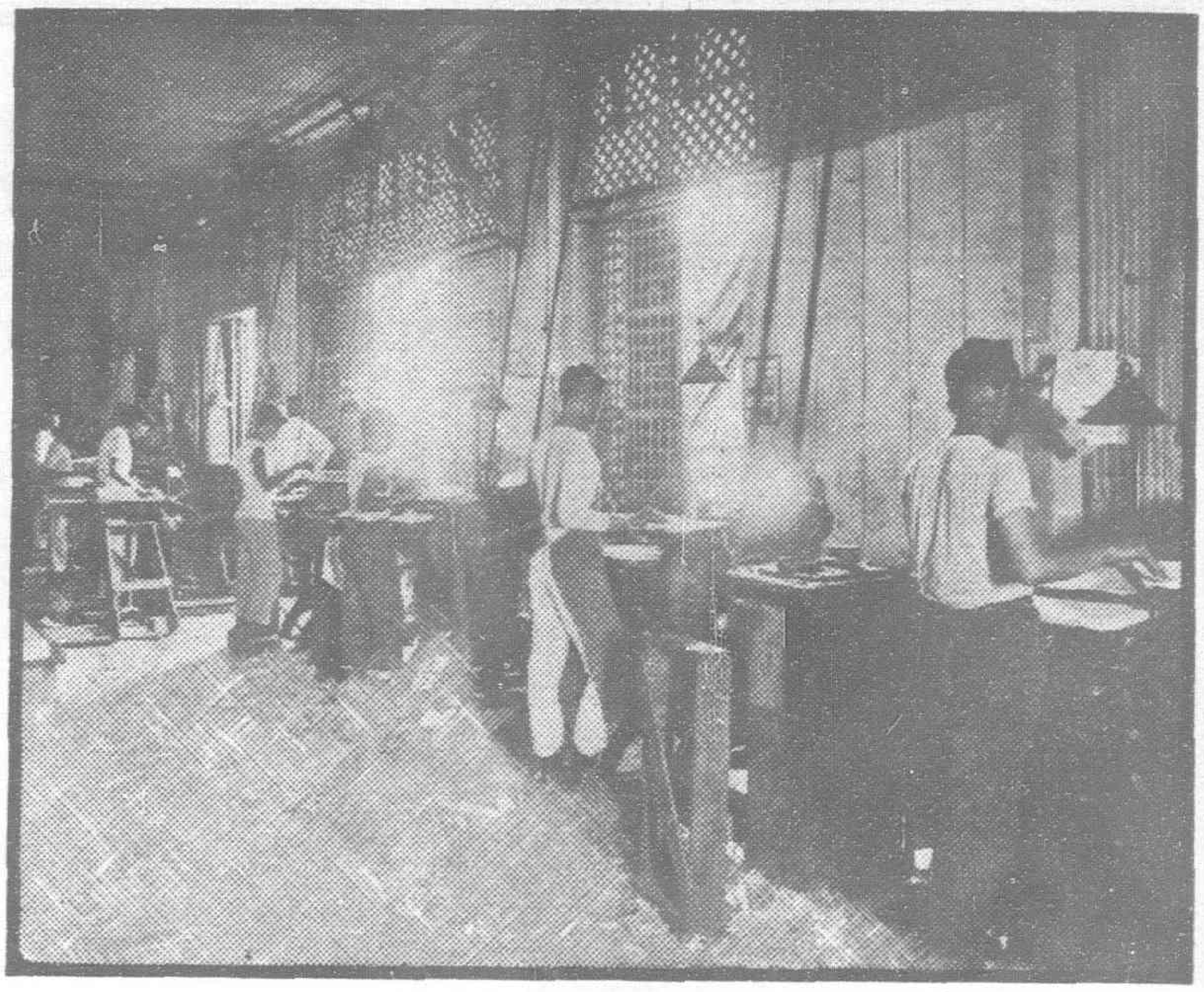

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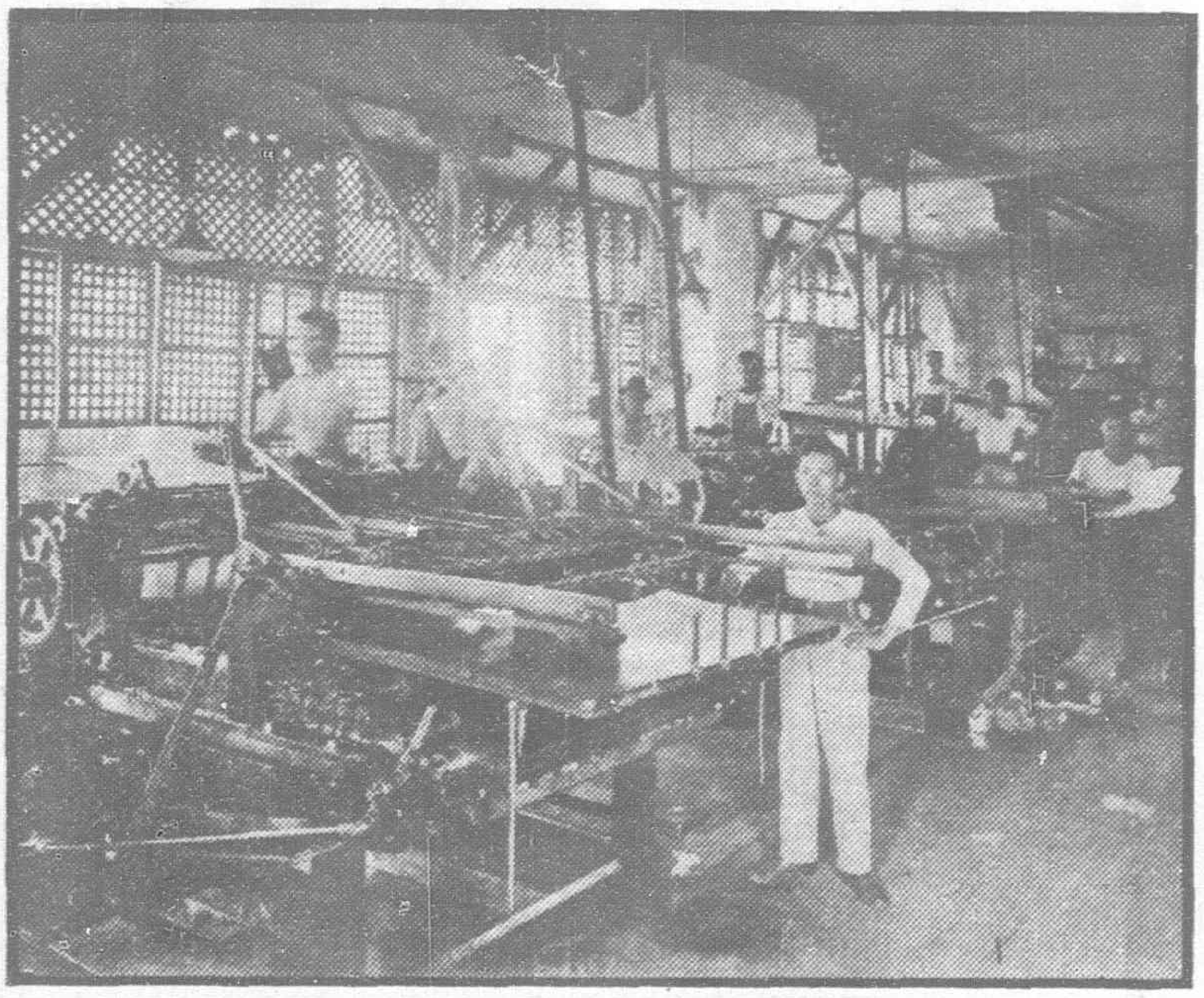

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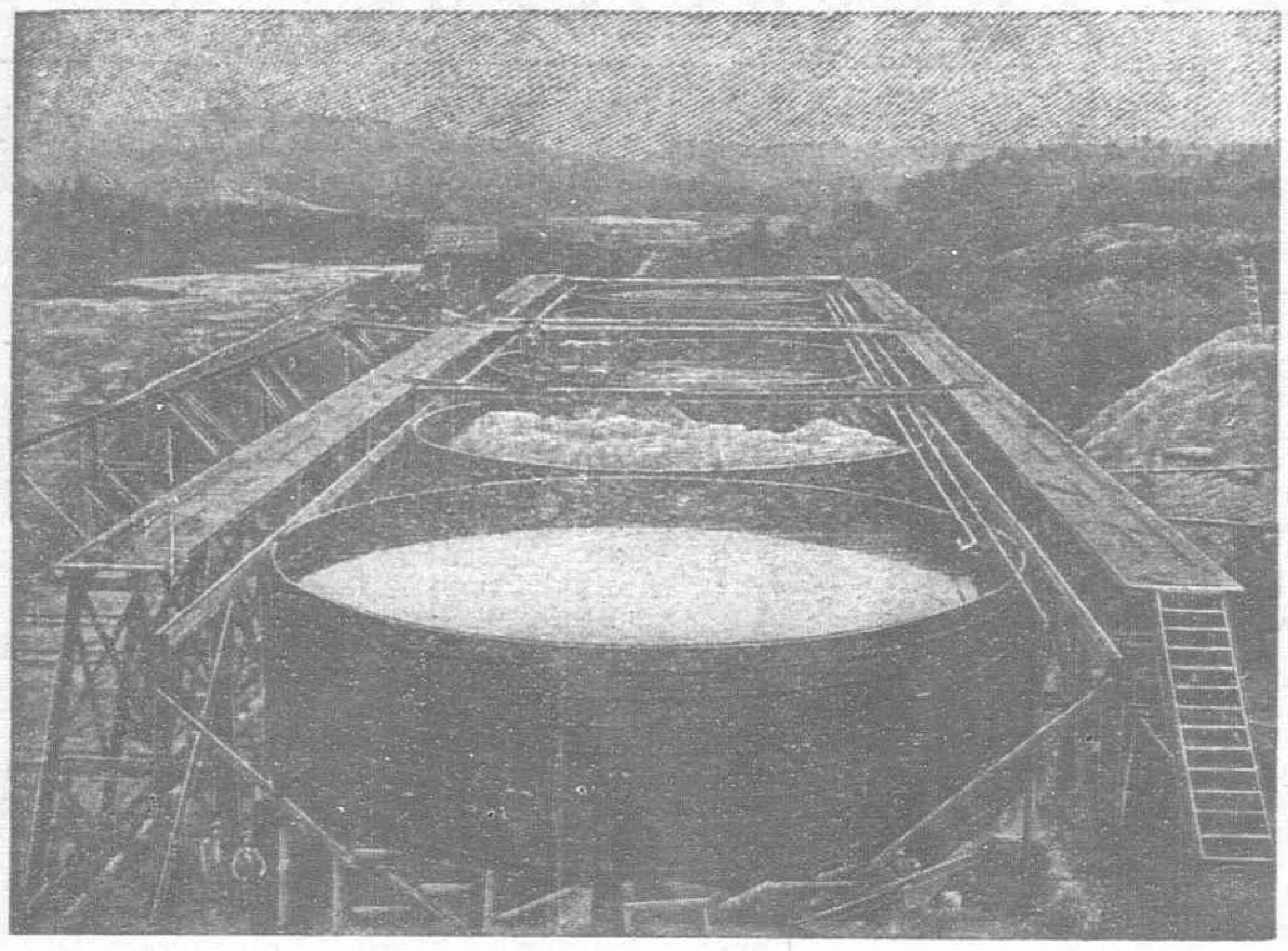

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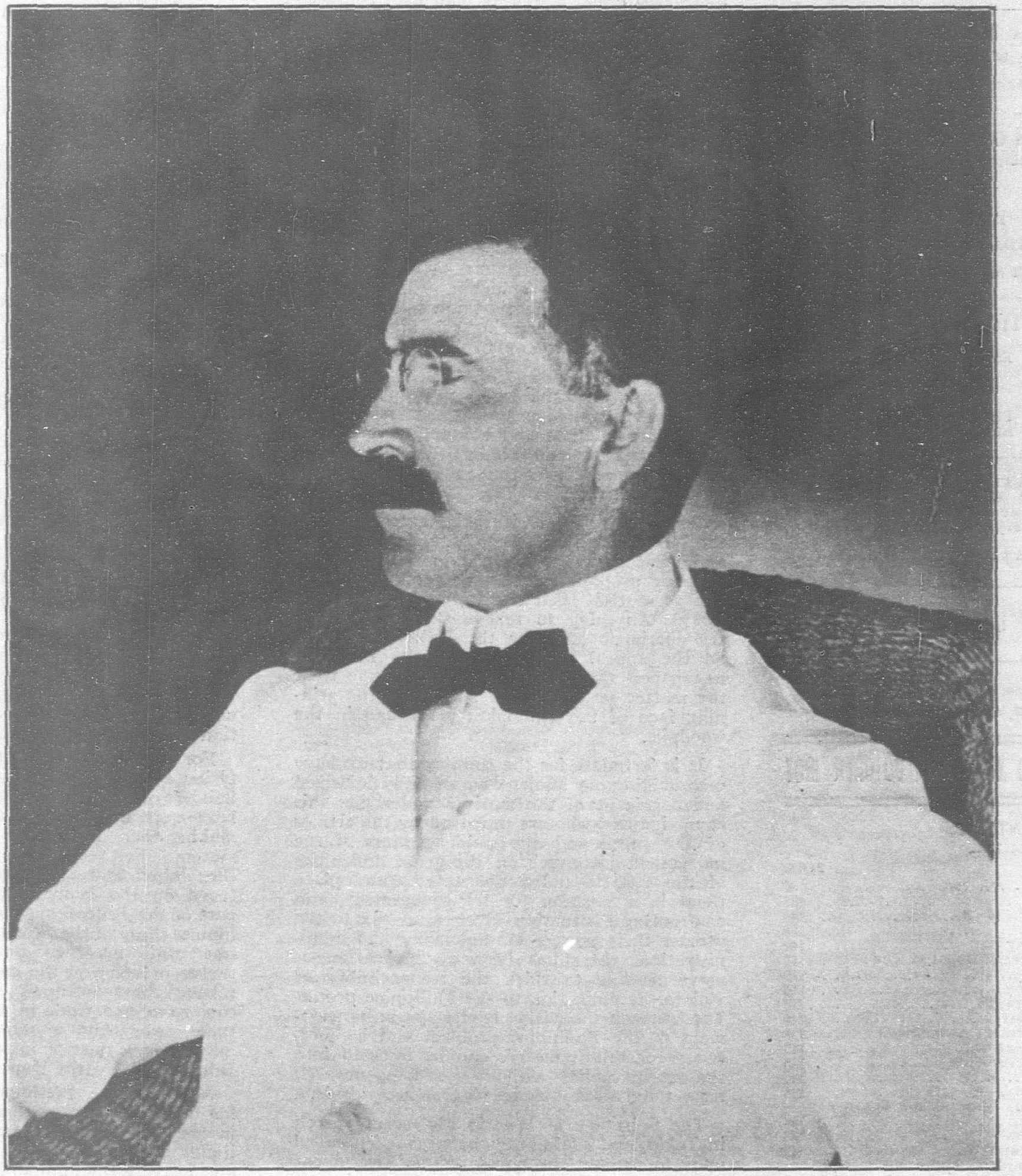

MR. RICHARD T. LAFFIN

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MANILA, SHANGHAI AND YOKOHAMA, OCTOBER 1907

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THE SALE OF THE PHILIPPINES TO JAPAN

The last two years has witnessed the growth of a sentiment in the United States favoring the sale of the Philippines to Japan as the only solution of our Insular and Far Eastern problem. The frequent comment in the leading journals of the country has lent an exaggerated significance and importance to the proposition, which when viewed from a patriotic and practical standpoint is not only misleading, but highly prejudicial to the best interests of the nation and our prestige in the Orient.

To the foreign and those unfamiliar with the facts underlying the proposed sale of the Islands to Japan, it would appear at first sight that the question had been seriously entertained by our Government, when, as a matter of fact the sentiment to this end has been fostered by a clique of shrewd and scheming capitalists representing two of the leading protected interests of the country. To save their industries from a purely imaginary competition from Philippine products, they are apparently willing to sacrifice the honor of the nation in its dealings with the Philippines and our prestige with the world at large. It is nothing to them whether we comply with our obligation to the Islands, or whether we lose "face" and our trade in the Orient, so as their beet sugar and tobacco factories are saved from the possible competition of the Philippine products. This selfish motive, and this only, is at the bottom of all the agitation favoring the sale to Japan. By the aid of a powerful organization supplied with liberal campaign funds, and the maintenance of a strong and shrewd lobby at Washington, while carefully concealing the real motive, the interests have been insiduously advancing this argument for over two years as the only solution to the Philippine problem.

Their appeal to the American people for support in this campaign ignores the higher attributes of patriotism and honor, and presumes that the nation is guided in its policy by the same sordid and selfish motives that govern their own actions.

Dollars and Cents is their cry! See what the Islands have cost us to date, $400,000,000! and what have we received in return! It is a losing proposition! Let us get from under! Let us scuttle! Sell the Islands! Give them away! Anything to relieve the nation from the enormous drain on the Federal treasury. So the appeal has found an echo in many newspapers throughout the country, who treat the matter seriously, and fail to see the grinning face of the Ethiopian gentleman in the woodpile.

It is fortunate for the country that we have men guiding our affairs who are fully informed and cognizant of the motives underlying this campaign and who are unmoved by the clamor of the press and the paid agitators of the movement. Recognizing the great difficulties of the task to uplift the natives and place them in a position for self-government, and confronting a situation which must tax to the utmost their powers of diplomacy and administration, there has been no intimation or move tending to shirk the responsibility or violate the obligation to the Philippine people. The honor of the nation is at stake in its treatment of the Philippine problem and no mercenary or selfish motive can be injected into the present policy without sacrificing our self respect and all that makes for true Americanism.

The Secretary of War in his recent speech in Tokio, and again at Shanghai, has felt called upon to reassert the policy of the Government towards the Islands, reiterating the sentiments which have been time and again expressed by him in dealing with this subject. It is time that his words should be taken seriously, and that a quietus be given to this ever recurring topic. His words are a direct answer of the present Administration and a forecast of the future attitude of our Government to the agitators at home and in the Philippines who are seeking to embarrass and hinder our work. It says in effect to all the world: "We are in the Philippines to stay until such time as we consider it proper to comply with our obligation, and turn the Islands over to the proper owners. Nothing can swerve the United States from the Policy it has laid down. No sacrifice of national honor or pride will be made by bartering the Islands to Japan or any other nation, and we will defend our position with all the resources at our command.

It is a fitting answer to those whose patriotism is synonymous with their pocketbook, to those natives in the Islands who interpret our treatment of them as sign of weakness, and to the Japanese and other foreigners who may have cherished the hope that our altruism was only a sham and that we could be bought off for a few paltry dollars.

To relinquish the Islands at the present time without having accomplished our mission, or having proven the practicability of our ideas in dealing with the question, would lose for the nation all the prestige gained through their acquisition and the outcome of the Spanish war. It would be a tacit admission to all the world that we are a nation of braggarts and incompetent to handle a situation that any little fourth rate European power would be only too glad to take over and manage successfully. It would forever lose for us our standing in the Orient and gradually drive our trade from the shores of Asia. Our proud position amongst the nations would be sacrificed and in its place we would become the butt and ridicule of the world. The mere agitation of the question in the press is to be deprecated as it tends to create a false impression amongst a people who look on it as a confession of weakness. The Filipinos, Chinese, Japanese, and other Orientals interpret the discussion to our disadvantage, and attribute to us a sense of fear for the future.

As the question is one arising from purely mercenary motives the answer should be based on the same selfish grounds. The interests behind the agitation claim that the Islands are a losing proposition, and for that reason we should sell them. Of course they are a bad investment, but who is to blame? They do not tell the people that it is due largely to their own efforts in thwarting equitable legislation that the Islands are not more prosperous. It is axiomatic that you can't knock a man down, bind his hands and feet and stand over him with a club, and expect the poor devil to make any effort to protect himself. All he can do is to throw himself on the mercy of his captor. Neither can a country prosper and develop its natural resources and riches if it is handicapped by adverse and discriminating legislation in whose enactment the inhabitants have had no voice or representation. This is the situation in the Philippines to-day.

For the sole benefit of two or three transportation companies and some misguided shipbuilders of the East, the United States shipping laws were extended to the Philippines, thus making them in effect a part of our Federal system. For the benefit of the labor element, the United States immigration laws were fastened on the Islands, again making them a part of the Federal system, but when the Philippines through the Secretary of War requested free trade for their products, which would revive industry in the country, the sugar and tobacco trusts stepped in and said, No. You can have free trade in all other products but these two. And a subservient Senate Committee made justice impossible by killing the Bill, passed by the House of Representatives.

Although the President urged Congress in his annual message to modify the land laws in force in the Philippines—which at present limits a corporation to holding 2500 acres—and increase the limit to 25,000 acres, the same interests steadily blocked any action in this direction.

In every possible manner they have made it difficult for large commercial concerns to engage in agricultural enterprises, and after several years of successful obstruction on the part of their lobby at Washington, which has brought about the present depression in the Islands, they cynically turn to the public and say," The Islands are a bad investment, let us sell them or give them away."

The Philippines are not a bad bargain. They are not a bad investment. No country in the world offers such inducements for the investment of capital, if the laws are passed which will permit their development. The lands are there, the labor is there, and only capital is lacking. But capital will not enter, until the Islands are given a fair chance and the limit on the lands increased. Keen interest is manifested by financial circles in the United States in the Philippines, and capital is slowly going into such enterprises as are not affected by adverse laws. The mining industry shows signs of a healthy growth, and in the next year or so, there will be some millions of American capital invested in these ventures. But the great wealth of the Islands lies in agriculture, sugar, tobacco, hemp, etc., and when the American market is opened to these products and the land law repealed so that some inducement will be offered capital the Islands will soon recuperate and will prove one of the best investments the United States has ever made.

In favoring the sale of the Islands to Japan the sugar and other interests have overlooked some important economic points, which would act as a boomerang if their proposition was carried out.

Hemp is a Philippine monopoly. It can not be grown profitably in any other part of the world. The United States is the largest consumer of this staple. The hemp market of the world was formerly held by London, and the American purchaser had to pay tribute to the British interests who monopolized the transportation and marketing of the fiber.

By abolishing the export duty on direct shipments to the United States the market was shifted from London to New York, thereby saving the American manufacturer many millions of dollars.

Let us suppose that the United States would consent to the sale of the Islands to Japan for say $50,000,000. The present financial condition of this empire, and the propensity of the government to monopolize the various staples, such as salt, camphor, tobacco, sugar, etc., would lead to the inevitable monopolization of the hemp industry also. An export tax of $25.00 per ton would not be too much to load on this staple, which the world must have, and the consequence would be that our cordage manufacturers would annually pay into the Japanese treasury over $2,500,000, or more than sufficient to pay the interest on the loan which would be floated for their purchase.

The beet sugar interests in advocating the transfer of sovereignty to Japan are influenced by their fear of a great development of the Philippine sugar industry under free trade with the United States. Stimulated by the fiction of cheap labor, they claim that the home industry will be wiped out in a few years. Under American rule this is impossible, as the wage rate is steadily advancing to the unit of the dollar, and the demand for labor in other industrial enterprises limits the supply.

Under Japanese rule it would result that the native sugar industry would be exploited under government subsidies and encouragement as in Formosa, the wage rate would decline to the level of Japan or ten cents a day, and the cost of production decreased to a lower basis than in Java, and sugars dumped on the world's markets at a cost of a cent a pound. Only by a higher protective duty on raw sugars in the United States could the beet sugar industry withstand the competition. It is apparent that in advocating this policy, they are defeating the very end they seek to attain.

Aside from the political and economic principles, there are deep religious reasons which make such a transfer abhorrent and impossible to a Christian people. To turn over several million Chirstian souls to the tender mercies of an anti-Christian nation would be the crime of the centuries. The Christian influences and work of 400 years would be sacrificed.

AGRICULTURAL BANKS

The future of every fertile section of the Orient will largely depend upon the facilities provided to supply capital for the development of the natural resources. At the present time no system has been inaugurated whereby the struggling planter or miner may secure an advance on the value of his holdings at a reasonable rate of interest, no matter how secure the investment may be considered or how seriously the advance is necessary for proper and legitimate development. The banks throughout the area referred to have their hands full in meeting commercial demands so that the necessity of institutions devoted entirely to the encouragement of the planters is apparent everywhere. Movements along these lines are noticeable and if success is attained we do not hesitate in prophesying an era of development throughout eastern Asia that will astonish the world.

In Siam the agitation is gaining strength as may be seen by the comment of the Siam *Free Press* on the subject. The *Free Press* says:

"In a recent issue of this journal we referred to the benefits that would accrue both to the Government and the inhabitants of Siam through the establishment of an Agricultural Bank having branches in convenient centres of the country to aid the paddy-planter in carrying on his work with greater skill and diligence and in increasing the area under cultivation. Agricultural industry has been greatly promoted in this way in other countries, and the system is now being adopted by various Governments throughout the East, as a most profitable means of promoting agricultural and mining industries.

"We read in the *Straits Times* that, at the last meeting of the Perak State Council, the question of establishing an Agricultural Bank was again urged as the best means of developing the State and turning its resources into profitable account. It was further pointed out that the establishment of an Agricultural Bank would be an immense boon to miners, in opening up the mineral wealth of the country. The present state of affairs under which the large sums of money made by Chetties go out of the country, practically nothing being spent by them in helping to open up Perak, was condemned. The Council expressed itself as unanimously in favor of such an institution, and considered that if the Government gave $2,000,000, it would be quite sufficient an amount with which to start an Agricultural Bank.

"In discussing the proposal, the Pinang *Gazette* states that, while they have so often urged the establishment of an Agricultural Bank, both for the F. M. S. and the Colony, they failed to see what use an Agricultural Bank would be to miners. ----What is wanted is an institution that will advance money to the ryots on the security of their crops at a reasonable rate of interest, and thus save them from the clutches of the Chetty or Bengali moneylender.

"All this should prove very interesting for the promoters of agriculture in this country, and it is to be hoped the question will be given due consideration by the proper authorities."

In the Philippines an Agricultural Bank has been authorized and will be established in the near future.

The Chinese government is considering a similar government institution and the Japanese have already taken the initiative and with remarkable success.

MOSQUITO NETS MAY SOON BE RELEGATED

The rubber growing industry is very liable to receive a marked impetus when it becomes generally known that the mosquito and the successful rubber planter cannot thrive in the one and same community. A correspondent of a Singapore newspaper has discovered that a belt of rubber plants surrounding a house situated in a mosquito infected district has a discouraging effect on the bloodthirsty winged cannibals from the low areas. To substantiate this claim made by the Singapore correspondent comes the declaration of a planter near Perak who recently opened a rubber ranch where the land is low and swampy. He declares that the section, formerly the headquarters of legions of mosquitoes, is now so depleted that specimens are rare and bring a very high premium. This is all due to the fact that the rubber plants are flourishing.

We may even expect in the near future that the complacent, retired capitalists of New Jersey may be induced to participate in the rewards offered by the rubber industry in the Far East from a monetary view point and at the same time avenge themselves upon the tribe that has brought their well beloved state into disrepute.

The *Pinang Gazette* expresses its appreciation of the rubber growing industry on behalf of the Europeans on the ground and says:

"If rubber is going to enable half the Europeans to retire from the region of mosquitoes in affluence, and abolish the plague for the remaining half who from necessity or choice stop here, it is a virtue like mercy, twice blessed.'

TYPHOON SHELTER FOR HONGKONG

The severe loss of shipping at Hongkong from the disastrous typhoon of 1906 and the exposed state of the harbor should similar storms visit that important port, has roused the businessmen and officials of the colony to a realization of the necessity of proper provision against a recurrence of similar disasters. Plans have been prepared covering a scheme the cost of which would reach at least $1,500,000 but no definite action will be taken by the government until these plans are revised and, if consistent with the proper protection of shipping, the estimates reduced. In his recent speech before the legislative council of Hongkong His Excellency, the governor, in reference to this necessary feature of the public works for the year said:

"There is one item in the vote for next year to which I would invite your particular attention, to the typhoon shelter. (Applause). Sir Matthew Nathan promised there would be no undue delay and that it was intended to make a beginning this year. The delay has been occasioned, firstly, by the great amount of discussion as to where it should be, and secondly, on account of the complicated plans which had to be prepared before the scheme could be laid before the Government. The plans which have been prepared involve a cost of $1,400,000. They are now being revised to see if we can produce a scheme which will not involve us in such a heavy expenditure but will provide a serviceable breakwater giving substantial protection to craft and being capable of development into the larger and complete scheme. Apart from the promise in the name of the Government made by my predecessor I submit that a second shelter for small craft is most essential in this colony which depends so largely on its shipping and trade and is subject to cyclonic storms. I have placed on the estimates this year the comparatively small sum of $25,000 but I shall not hesitate to ask your assent to an increase of the vote either from current expenditure or even from the reserve fund if the circumstances permit. That would be with the object of carrying it out in a reasonable time and not hanging it up for a number of years."

EAST AND WEST CARNIVAL

An organization known as The Philippines Carnival Association has been organized for the purpose of arranging for a carnival to be held in Manila during the first week of February 1907. It will be known as the East and West Carnival and will have for its purpose the entertainment of the citizens of the neighboring countries and colonies as well as the inhabitants of the different islands of the archipelago. The climate in Manila during the month of February is particularly adapted to outdoor celebrations, being perfectly dry with most comfortable evenings. Special rates are being arranged so that the residents of the different Oriental ports may be able to take in the festivities at the least possible cost.

The scheme of the festivities as outlined by the committee includes the selection of a monarch crowned King of the Orient with his headquarters at Manila. He is enjoying this distinction to the best of his ability on the morning of February 3rd when the King of the Occident arrives in the harbor on a visit to his oriental majesty. He is met in the harbor on board his ship by the King of the Orient and is given the freedom of the city. On the following day there will be a monster parade in which both courts and their retinues participate. On the third day the followers of each monarch will contend for supremacy in feats of strength and other athletic exercises for prizes. At the conclusion of these contests, King Carnival with an enormous host arrives and declares that his authority is supreme whereupon the Kings of the East and the West disappear and the city is given over to King Carnival and his gay retinue. The festivities will conclude with a grand carnival ball. At an hour indicated by the ringing of bells and the firing of guns the streets will be cleared for the maskers during the festivities.

Captain G. L. Langhorne, Aide de Camp to General Wood, is president of the association and the project is receiving liberal support from the business men of the islands.

President Roosevelt has been asked to cooperate by having the Armada in Manila bay during carnival week and to invite participation by foreign warships in Far Eastern waters.

PHILIPPINE SUGAR COMPROMISE MEASURE

It is a source of gratification to THE FAR EASTERN REVIEW to be in a position to announce on the authority of Secretary Taft that the administration expects to secure a compromise measure at the next session of congress in the form of a limited free entry of Philippine sugar and tobacco into the United States. This declaration was made in his message to the delegates at the opening of the Philippine Assembly and follows:

"Another difficulty * * * * in preventing material progress has been the failure of Congress to open the markets of the United States to the free admission of Philippine sugar and tobacco. In every other way Congress has shown its entire and generous sympathy with the policy of the administration, and in this matter, the popular branch of that body has passed the requisite bill for the purpose, by a large majority. Certain tobacco and sugar interests of the United States, however, succeeded in strangling the measure in the Senate Committee. I have good reason for hope that in the next Congress, we may be able to secure a compromise measure which shall restore the sugar and tobacco agriculture of the Islands to its former prosperity, and at the same time by limitations upon the amounts of importation allay the fears of injury on the part of the opponents of the measure. Still the delay in this much needed relief has greatly retarded the coming of prosperous times and has much discouraged supporters of our policy in America who have thought this indicated a lack of national purpose to make the present altruistic policy a success."

In the August number of THE FAR EASTERN REVIEW, we drew attention to the advisability of such a course on the part of the friends of the island industries in order to disarm the sugar trust and remove all cause for alarm on the part of those who were being misled into the belief that Philippine sugar would prove a menace to the home industry. The following is an excerpt from the editorial referred to:

"Even with the tariff removed it would be impossible for the Philippines to supply the United States with the necessary quantity of sugar to make up the annual shortage within the next fifty years, if indeed the industry in the islands could ever be relied upon for half that amount.

"When the Philippines sugar bill was relegated to its living tomb in the committee room the opponents of the measure had practically admitted all the points in the arguments of the Philippine delegation with the exception of the impossibility of the Philippines flooding the United States with sugar should free entry be granted. It might have been an easy matter to arrange a compromise on a basis of the removal of the duty on a limited amount of sugar annually at that time but the administration, believing that the fight was won, refused to consider such a proposal, and when the Trust discovered how very easy it was to smother all legislation in committee later, refused to discuss the subject further.

"While it may be natural to a large constituency in the United States to believe that the Philippines would flood the American market with sugar and destroy the home industry those familiar with conditions in the islands are satisfied that such a fear is groundless. However, it may be that in order to allay the suspicion that the friends of Philippine sugar are conspiring to ruin the industry in the United States, a compromise may be effected at the next session of congress.

"There is reason to believe that in the coming battle the sugar trust will find the manufacturing interests arrayed with the friends of Philippine sugar. This was not the case during the former engagement. During the last year the attention of the manufacturers has been directed to the promising market in the Philippines under more favorable tariff regulations governing the importation of Philippine products, and from all reports they have expressed themselves in favor of removing the barriers altogether or on a limited quantity to a degree consistent with the preservation of the industry in the homeland."

And further, as demonstrating the patriotic attitude of Philippine Americans on this subject THE FAR EASTERN REVIEW concluded:

"Whatever may be the outcome of the fight, it promises to be a battle royal. And the Philippine exiles have the consolation, no matter what may be the outcome, that their campaign has been carried on in a spirit of fairness, desiring always to further the interests of the Philippines but not at the expense of any American industry or of the American people."

IRRIGATION WORK IN SIAM

The Royal Irrigation department of Siam is now constructing large sluice gates to prevent the regular overflow from the Spring tides to Klong Banghea and to regulate the supply of water through retention during the rainy season which under natural conditions rushes seaward and all benefit therefrom is lost. Last month, says the Bangkok *Times*, the Stoney sluice gates ordered by the department arrived at Bangkok and further explains the purpose for which they are being erected at the entrance from the sea to Klong Banghea. According to the *Times* this Klong is some 15 meters wide and at spring tides overflows into the adjacent paddy fields spoiling the same. So much so in fact that many cultivators have removed elsewhere. At least 200,000 rais of land has been spoilt in this way. The water from the territory of the Menam Chow Phya and the Bangkapong river runs along Klong Banghear, traveling to this Klong by means of Klong See Yek and Klong Song, and at the times when people want water it is going to the sea.

These sluice gates are designed to prevent this. In the high water season the gates will be opened as often as desirable, but in the rainy season when the water is not yet high, and people want to retain all the water there is, the gates will be closed and the sea water kept out.

This is not irrigation, but simply drainage and retention, and the scheme has become more important since the Irrigation Department has closed all the outlets to the Menam and Bangkapong rivers. The sluice gates will have a foundation of ferro concrete, upon which the steel frames of the gates will rest. There will be four sluices and each gate is six metres wide and deep. They are supplied by Messrs. Ransome and Napier of London, the patentees. Unlike ordinary sluice gates which can only be opened when the water on either side is at equal level, the Stoney gates can be opened at any time and against any pressure.

The work of erection will take about three or four months, and will be conducted by one of the Department's engineers who, while in Europe on leave, visited the works of the Company supplying the gates in order to become familiar with the process of erection.

In order not to interfere with the trade along the klong a small lock will be constructed near the gates so that boats may pass always.

MONUMENT TO ENGLISH ENGINEERING AND CONSTRUCTION IN JAPAN

Among the few railway bridges exposed to the full force of the fury of the recent floods in Japan, that stood the test, is the one built by British engineers, forty years ago at Kawasaki. There have been many floods that raged against this substantial structure but at no time has it been affected. When the building of this bridge was contemplated the Japanese did not believe that any structure could withstand the fury of the Rokuge river which it spans in the rainy season and they proposed the construction of a temporary bridge at the least expense so that if it were carried away the loss would not be great and it could be easily replaced. In the floods that have but recently destroyed millions in Nippon and paralyzed railway traffic for a time, the Kawasaki bridge stands out as a remarkable monument to substantial British construction in the far east.

AMERICAN EXPANSION PAYS

The Mining and Scientific Press does not see any dire calamity in American expansion. Instead of listening to the "Antis" and calamity howlers, it has turned to the trade reports and there finds all the necessary consolation to sustain it in these days of doubting Thomases and worried Nancies. *The Press* says:

"Between the United States and her non-contiguous territories there is a trade amounting, in 1907, to $67,250,586 of exports and $74,807,690 of imports, exclusive of the $18,583, 702 worth of gold shipped into the United States from Alaska. That northern territory took nearly $4,000,000 worth of iron and steel manufactures, chiefly machinery, in 1907. The imports are three times and the exports six-times as much as they were ten years ago. Manifestly Alaska, Hawaii, Porto Rico, and the Philippine Islands afford openings for a further expansion of trade."

RAILWAY MILEAGE

Consul W. C. Teichman, of Eibenstock, quoting from statistics recently computed and published by a German periodical for railway science, says that they develop the remarkable fact that the mileage of railroads in the United States alone exceeds that of any other country in the world, and also that of entire Europe. He summarizes:

The total length of the railways of the world on January 1, 1906, is declared to have been 563,771.7 miles (English) or, in the figures given 905,695 kilometers, of which the United States represents 215,713.39 miles (351,503 kilometers) and Europe 192,247.52 miles (309,393 kilometers), resulting in an American lead of about 23,500 miles over Europe. The total mileage on the American continent is estimated to be more than one-half of that of the entire world.

Railway construction during 1905 added 12,524.33 miles (20,156 kilometers) to the world's total mileage, 2,485.48 of which were in Europe alone, where Germany shows the comparatively largest increase—six times in excess of that of Great Britain. Considerable progress is now being achieved in the building of additional railways connecting German-African cotton and mining districts in the interior of Africa with the seacoast.

The report calculates that the entire capital invested in the construction of the world's railroads amounted on January 1, 1906, to 182,000,000,000 marks or $43,310,000,000.

COCOANUT PLANTATIONS IN MALAYSIA

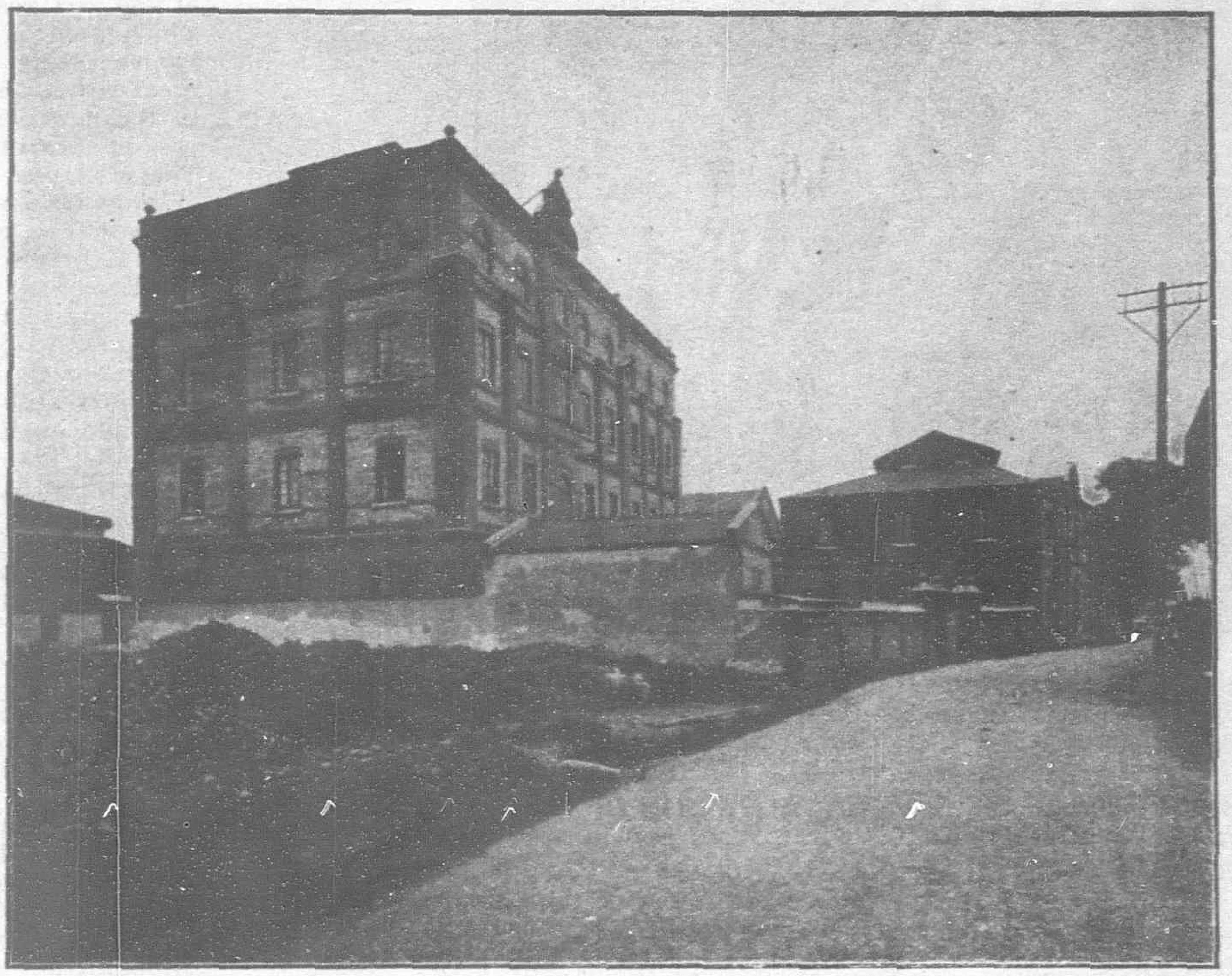
The value of cocoanut estates in the Federated Malay States is returned by L. C. Brown, the official in charge of the plantations, as about $20,000,000 (Malaysian dollar=56.7 cents), Perak holding pride of place in the published statistics. Although it is gratifying to be able to state that cocoanut planting still finds a certain amount of favor among the native community, he states that the further extension of the cultivation is not so promising or making the strides which, with greater facilities from government, it might do. The higher quit rent has proved detrimental as regards the extension of products other than rubber.

THE LEE DAH FLOUR MILL, SHANGHAI

The Lee Dah Flour Mill, the most recently built among the mills in Shanghai, is conveniently situated on the Soochow Creek at Jessfield, and is the property of a purely Chinese Company with Messrs. Lee Yuen-shun, Wong Yi-ting and Koo Hin-yik as directors and Mr. Yuan Pao-san general manager.

The capital of the Company is Tls. 300,000.

The mill building, godown, engine and boiler rooms, are made of red and blue bricks and are lighted throughout by electricity from a private plant belonging to the company.



FRONT VIEW OF THE LEE DAH FLOUR MILL AT SHANGHAI WITH LARGE WHEAT GODOWN TO THE RIGHT

The machinery, which consists of twelve double stands of rolls and the usual cleaning and grading machinery, was supplied by Messrs. Barnard and Leas Manf'g Co. of Moline, Ill., U. S. A., for whom Messrs. Fobes & Co. are the local agents, and was erected under the supervision of Mr. H. P. Stagg of Springfield, Mo., who is to be congratulated on the smooth running of the mill since it was opened on the 28th of May last.

The capacity of the mill is 400 bbls. of flour per day, but the buildings and engine (250 H. P.) are made with a view to increase this to 800 or more barrels.

Within a fortnight of the opening day the mill developed two important points that reflect credit upon the builders and miller sent out to erect the machinery, and whose only assistance was Chinese.

(1) A capacity of 10% over the guaranteed output of 400 Bbls.

(2) The standard of 4.29-100 bu. of wheat to a barrel was reached and has been maintained under the moist conditions of June weather.

Two, three, or four grades of flour may be produced, as required, the machinery being so arranged that the miller in charge can, from a single place on the first floor, examine the wheat in the various stages of cleaning, grinding, separating, and grading, and immediately determine if any machine is at fault in doing its part of the whole process. Millers will readily see the great advantage of this feature, especially where the employees are all Chinese.

There are now seven roller flour mills in Shanghai, with a combined daily output of 12,000 sacks of 50 lbs. per day.

Half the wheat used in the Lee Dah Mill is imported from America, the other half coming from the province of Shantung.

In connection with this mill and with milling in general in China, the following notes will be of interest.

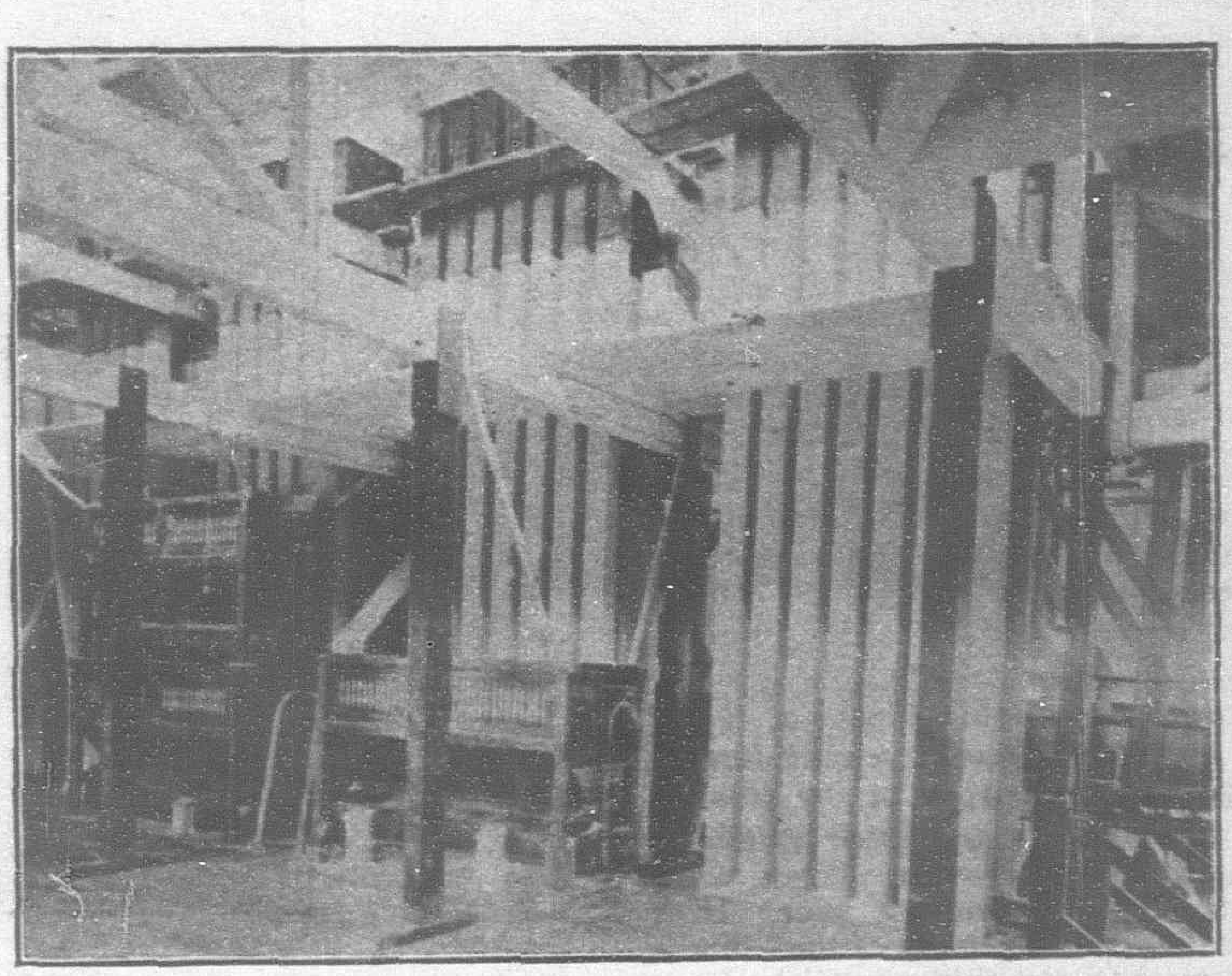
China is looked upon as a country of cheap labor, but it is doubtful if it will apply to the running of flour mills. The Lee Dah mill employs a total night and day gang of 40 laborers.

In the main mill 32 as against same mill in U. S. 14; in the engine and boiler room 8 against 4 in the U. S.

The wheat and flour is handed from the river front, in and out of the warehouse by contract labor at a cost of 45 cents. Mex. per ton of 2,000 lbs. each way—say 90 cents in and out.

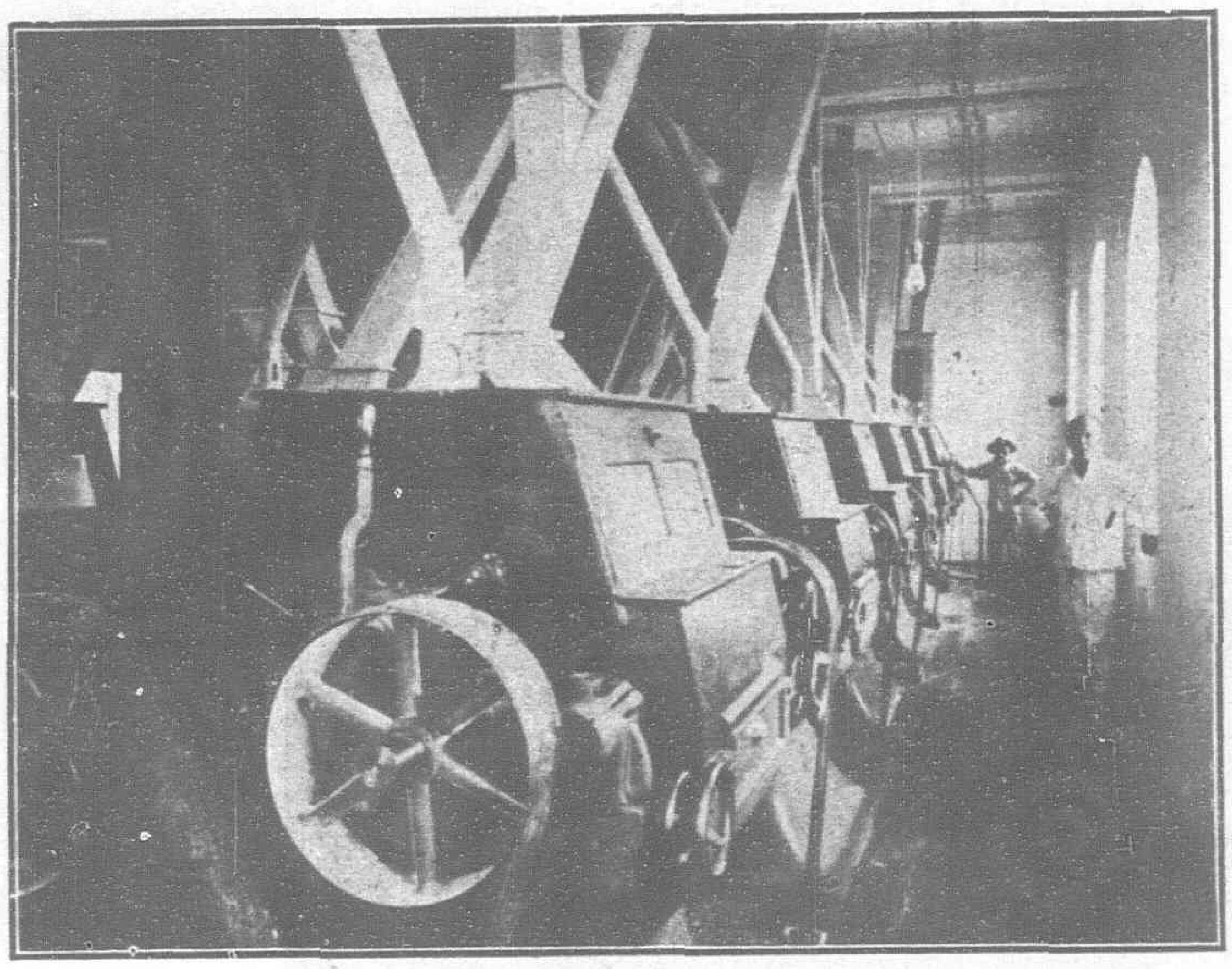
The use of wheat flour has considerably increased Central and Northern China in the past ten years, but the capacity of the Mills now running at Shanghai are reckoned as quite sufficient to supply the local and outport demands under normal conditions of trade. For the past year it is claimed no profits in flour milling have been made, and most of the mills have run at a loss. The only mill in Shanghai controlled by foreign capital passed its dividend last January and since has been partly shut down most of the time.

Owing to wheat shortage in the Yangtse Valley, which crop is relied upon to supply the mills at Shanghai, over 39,500 long tons of wheat from America were imported in the past eight or more months, and from Australia, 5,300, but it was found by experience that



THIRD FLOOR OF THE LEE DAH FLOUR MILL AT SHANGHAI SHOWING ELEVATORS, REELS AND SIFTERS (freight being the same for each) American flour could be laid down cheaper than the local mills could import the wheat and make the flour.

The wheat crop of the Yangtse Valley, inclusive of the famine area, has already been harvested and proves to be above the average in quality and quantity, but owing to the scarcity of rice, the price is maintained at a comparatively high level, but the still higher level in the U. S. will prevent any demand from that source for the remainder of the present year. Crops in the North, owing to the drought, will be below the average.



SECOND FLOOR ROLLING MILLS INSTALLED IN THE LEE DAH FLOUR MILL AT SHANGHAI

GIGANTIC RUSSIAN FLOUR TRUST IN MANCHURIA

Siberian exchanges announce that Kharbin is now on the eve of the formation of a flour trust which is being arranged by the local mill-owners in company with the Chinese Eastern Railway.

The local millers who, as already known, recently formed a flour-mill company, the consequence of which was an increase in the price of flour on the Russian market, have now approached the Chinese railway with a proposal to make a flour-mill trust in Manchuria, in which the railway will participate with capital and by such auxiliary means as transport by railway, by river in its steamers, and by grants of land; the accomplishment of the remaining activities of the trust will rest on the millers. The proposed net capital of the trust is four million (roubles) of which the millers will furnish a million and the railway three millions.

The details of the enterprise have been worked out and the undertaking itself promises to be grandiose.

It is projected to get into the hands of the trust the entire local Chinese grain market, to stifle all competition of retail corn traders and to capture the corn markets of the Priamur and Zabaikal.

The organizers entertain hopes of great success and of the conquest even of foreign markets. The average output of the trust is estimated at about eighty thousand pounds of flour a day. It is proposed to begin work from the autumn of the current year. It is understood that the management of the Chinese Eastern Railway has met this proposition very sympathetically. Negotiations with the office of the line at St. Petersburg are actively proceeding and there is reason to expect acceptance of the project. Besides the support of the management of the railway, the company' in the person of Mr. Berg, is petitioning the Minister of Finance for acceptance of the proposal, emphasizing the necessity for realization of this enterprise as having an important bearing upon the growth of Russian political and economic influence in the East.

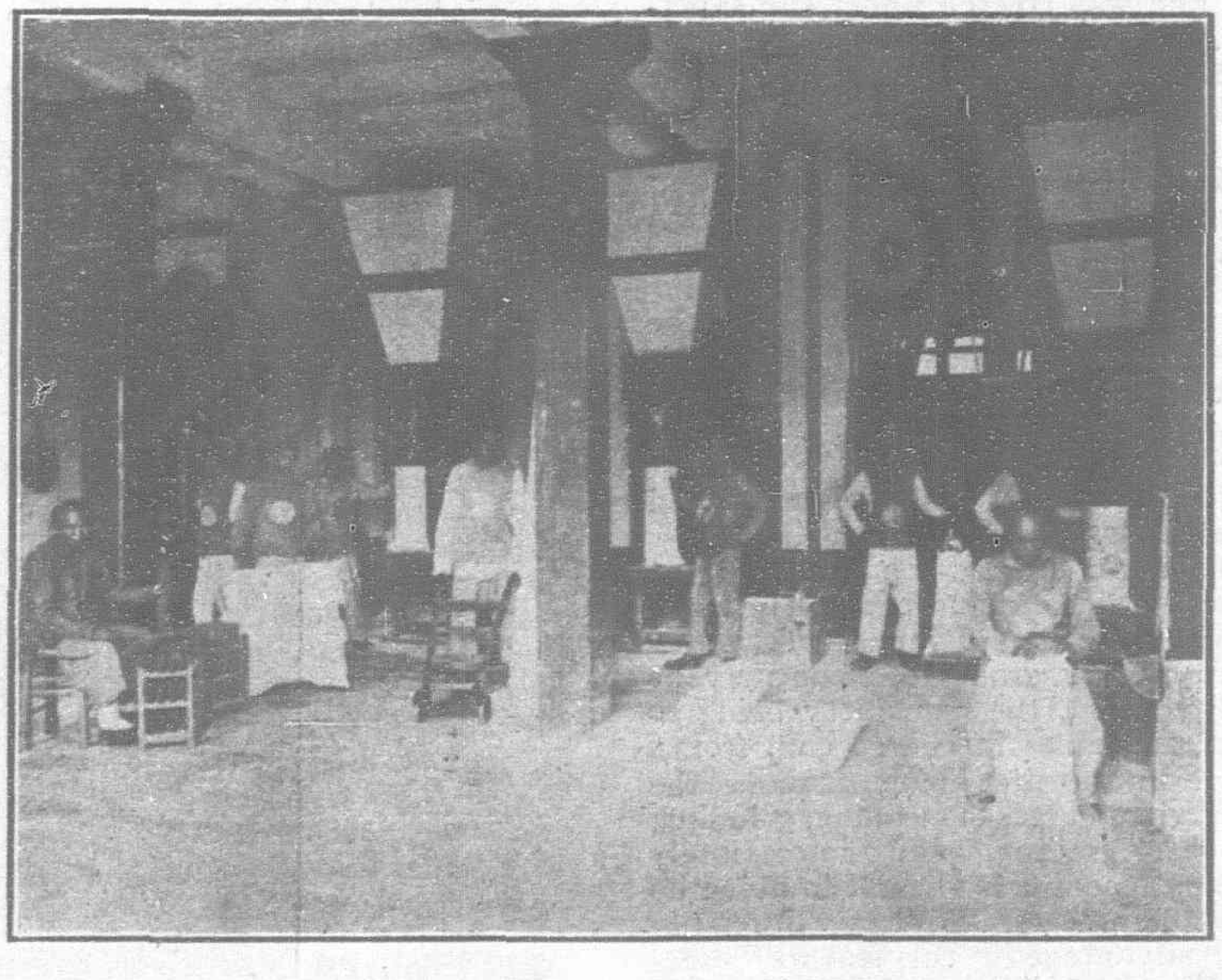
NATIONALIZATION OF JAPANESE RAILWAYS COMPLETE

On October 1st, with the completion of the purchase and transfer of the Kwansai and Sangu Railways by the Japanese government, the nationalization of the railways of Japan was realized and the revised freight and passenger tariff went into effect.

The total mileage of these eighteen lines in 4,809 odd miles distributed as follows:—Tokaido railway, 1,548 miles, Sanyo, 418, Nippon, 860, Hokkaido, 158, Kyoto, 22, Hankaku, 70, Tokushima, 21, Kyushu, 446, Nanao, 34, Hokuyetsu, 85, Sobu, 73, Boso, 39, Kobu, 27, Hokkaido Colliery Railway, 207, Nishinari, 4, Ganyetsu, 9, Kwansai, 280, and Sangu 26.

The minimum rate fare on these lines is 1 *sen* 5 *rin* per mile within 50 miles, and the maximum 2 *sen*. Compared with the revised rate which is 1 *sen* 6½ *rin* those lines to be favored by the change are only 707 miles. The remaining lines, 1,333 miles, will have their fares greatly raised by the change. In short the benefits to be received from the revision are but local.

The total expenditure for the construction and improvement of the government railways involved in the budget approved by the diet of the last session stands at 138,830,000 *yen* which sum is to be defrayed in successive twelve years commencing from the present fiscal year. Of the sum 14,850,000 *yen* will go to the new construction fund, while 33,980,000 *yen* are carried to the improvement fund. The next year's estimated outfit which stands at 29,900,000,000 odd *yen* has to be necessarily increased on account of the purchase of the several private railways as the result of the practice of the Railway Nationalization System. According to the programme the new railways the construction of which is to be started in the course of the next fiscal year are the Oita-Miyazaki-Yoshimatsu line, Niitsu-Shibata line Usa-Oita line (of the former Kyushu Railway) and the lines between Yamada and Toba, between Nitta and Nanao and between Kawarada and Tsu of the former Kwansai Railway. Some of these lines have been already in course of construction by the companies to which they belonged formerly but afterward suspended on account of their purchase by the government. With regard to the improvement work the plan of adding one line each to the Nara-Osaka, Nagoya-Tsu and Nara-Kyoto sections of the Kwansai Railway and running electric cars on these lines will probably be adopted and sanctioned by the Imperial Railway Bureau. As to the Kyushu Railway the reconstruction and work of doubling the lines, reconstruction of the stations and establishment of the coal depot are considered the necessary items of the next year's programme while on the former Nippon Railway's line it is also regarded to be no less necessary to double the lines between Oyama and between Uyeno and Tsushiura of the coast line. The elevated railway of the metropolitan street line to connect with Akihonohara of the former Nippon Railway via Manseibashi (former Kobe Railway) starting from the Central Station is also said to be involved in the next fiscal year's budget.

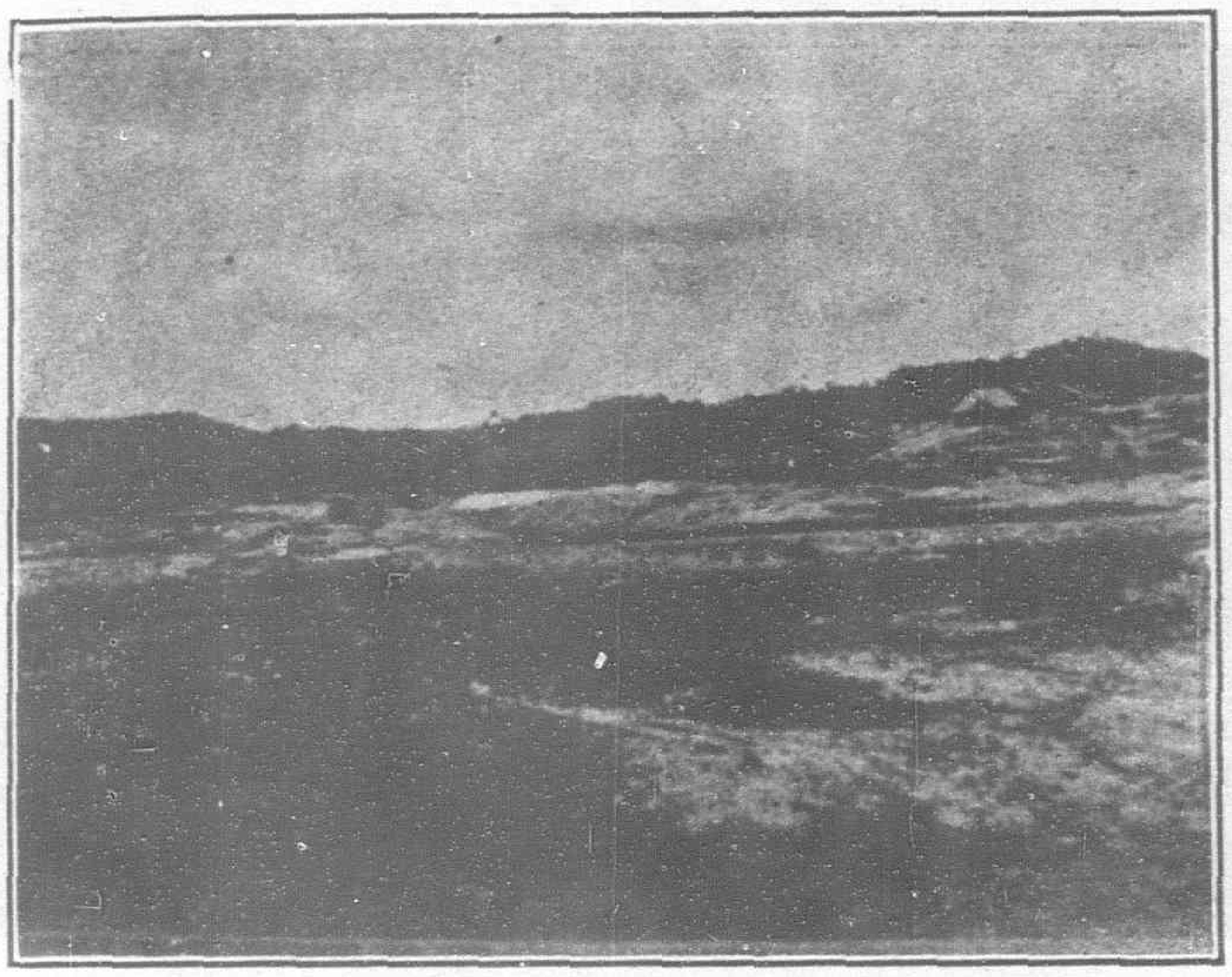


LOWER FLOOR OF THE LEE DAH MILL AT SHANGHAI WHERE THE PACKING IS DONE

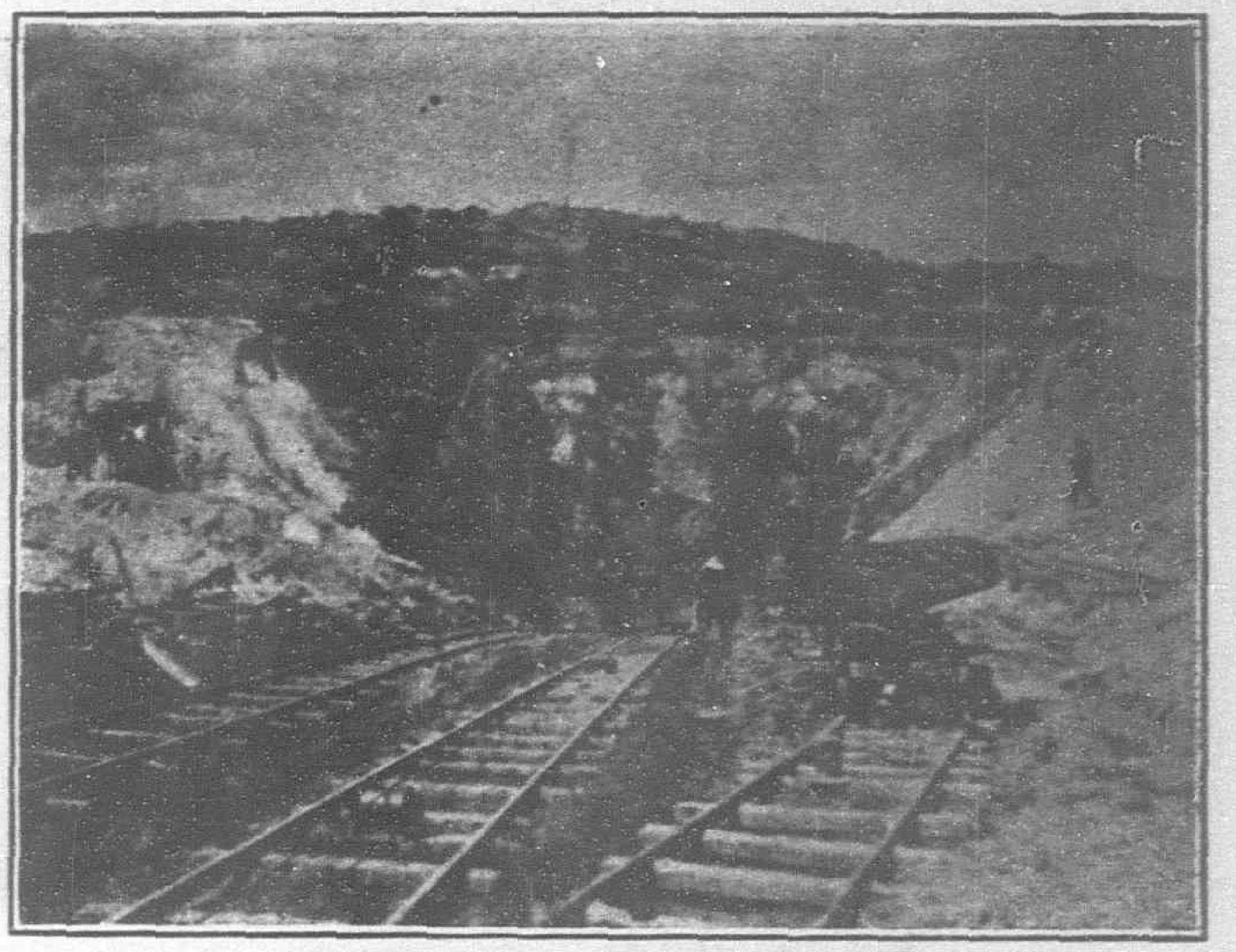
GOLD AND TIN MINES IN THE FEDERATED MALAY STATES

(Continued from September.)

It has been known for some time that a lode exists at Machi. This is now being exploited on a small scale by Sheikh Abdul Raman. It is situated in the bed of a right tributary of the Machi near a divide called Ginting Tua; trends, as far as can be gathered from a limited exposure, 10 degs. east of north, and is about 8 ft. wide. The walls are hard silicified shale. The chief mineral content of the lode is pale yellow opaque garnet, occurring in masses of small crystals. A number of specimens of mineralised stone have been examined in my office, microscopic and chemical methods showing cassiterite, blende, and arsenopyrite. Thin sections show monoclinic pyroxene closely associated with the cassiterite, and a fibrous mineral which is probably tremolite. The base of the ore is quartz.

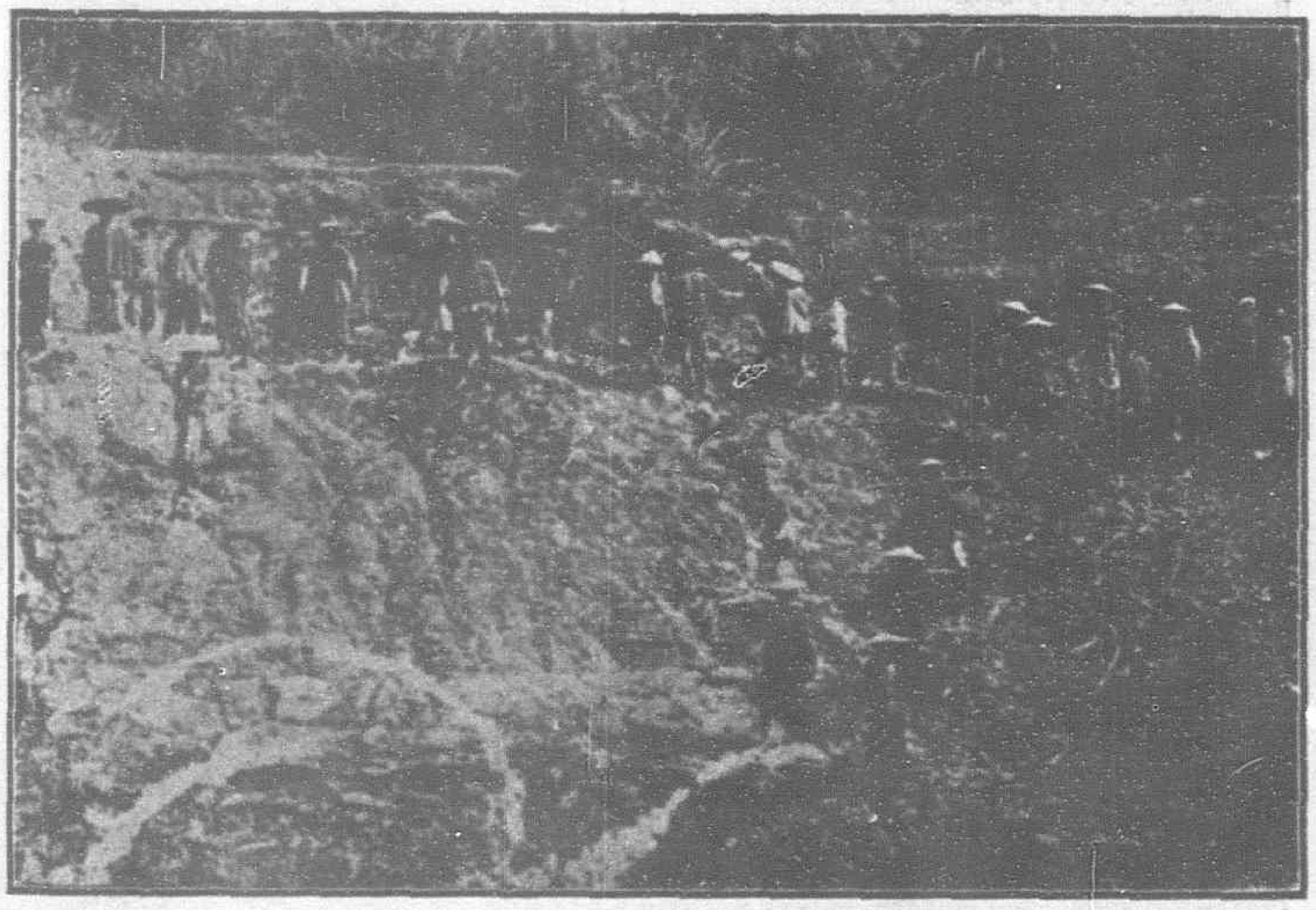


PROPERTY NEAR THE W. GRANT MACKAY'S MINE AT SUNGEI BESI

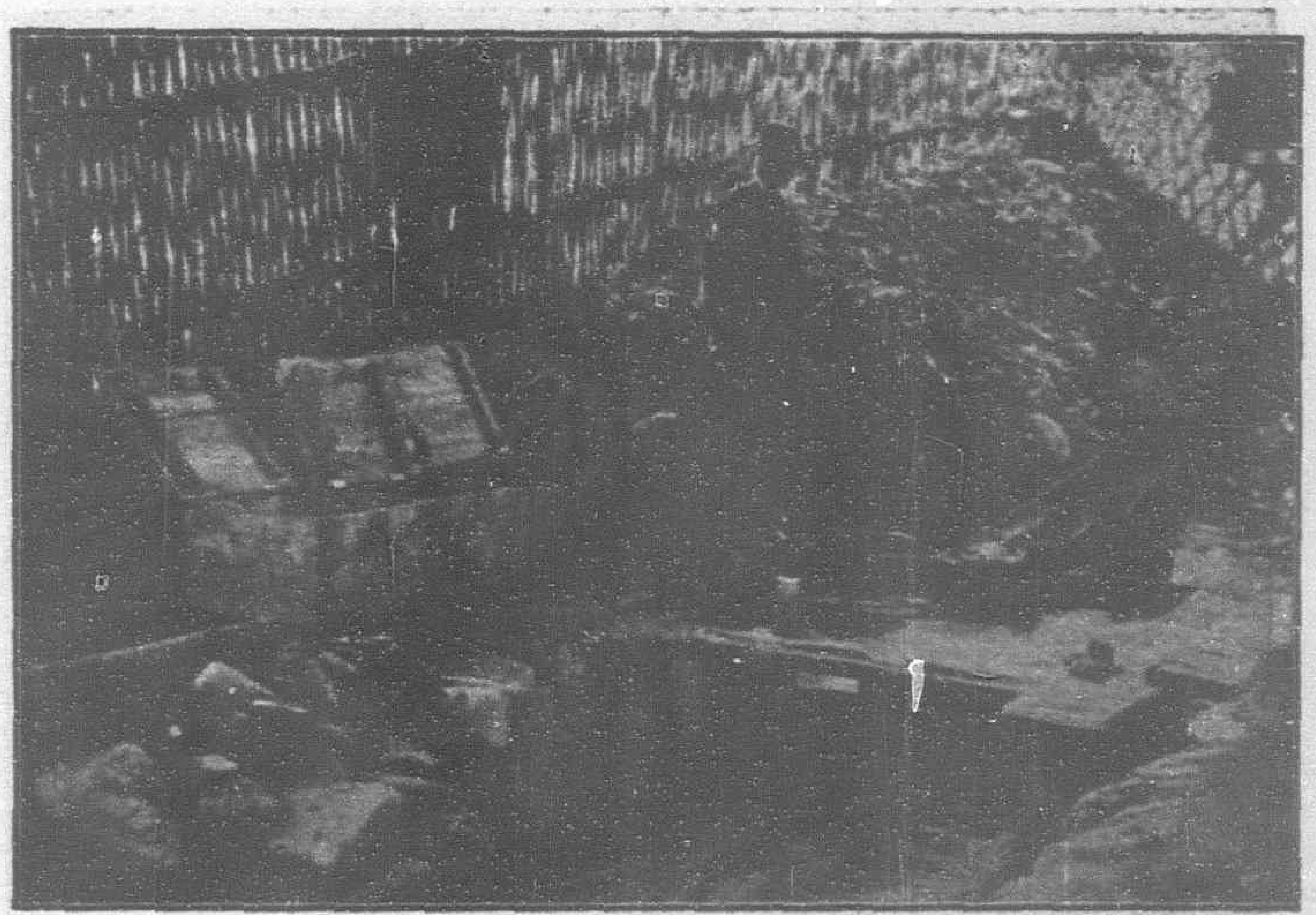


OPEN CUT AT W. GRANT MACKAY'S MINE AT SUNGEI BESI

I am indebted to Mons. Legros for the following analysis, made in Paris, of a sample from this lode: Silica, 60.70; tin oxide, 6.20; iron, 15.26; copper, traces; lime, traces; magnesia, .72; sulphur, 13.97.



SURFACE MINING IN MALAYA PROFITABLE



SLUICE FOR PANNING OUT FINE ORE

Some years ago the same lode was reported on by Mr. Laws, since deceased. I have not seen the report, but I am told that he mentioned gold and nickel. I have not searched for gold, but I have for nickel, and neither Mr. B. J. Eaton, the Government chemist, nor myself can find a trace. Mr. Laws evidently found a small pocket of some nickel-bearing mineral.

Judging from the state of the ground, I do not think much more than ten tons of rock can have been moved from the lode, and an inspection of the stone still lying on the surface and my specimens leads me to think that the analysis above was from an exceptional sample. The same must have been the case with a sample Sheikh Abdul Raman sent to the Straits Trading Company in Seremban, where an assay showed 15 per cent tin dioxide. It must be confessed that indications are not favorable, but prospecting has not progressed far enough to say more.

Sheikh Abdul Raman informs me that evidence of other lodes has been found in the low hills above the Machi. This information, together with the small amount of amang, the form of the ore, the absence of granite pebbles in the alluvium, and the apparent absence of granite outcrops, makes me think that the alluvial tin ore has been derived from small lodes; and I should say it would be worth while to prospect the slopes of the valleys with a view to hydraulic mining, if I knew of any feasible method of obtaining sufficient water. The tailings are worthy of attention.

MINES IN THE MAIN RANGE

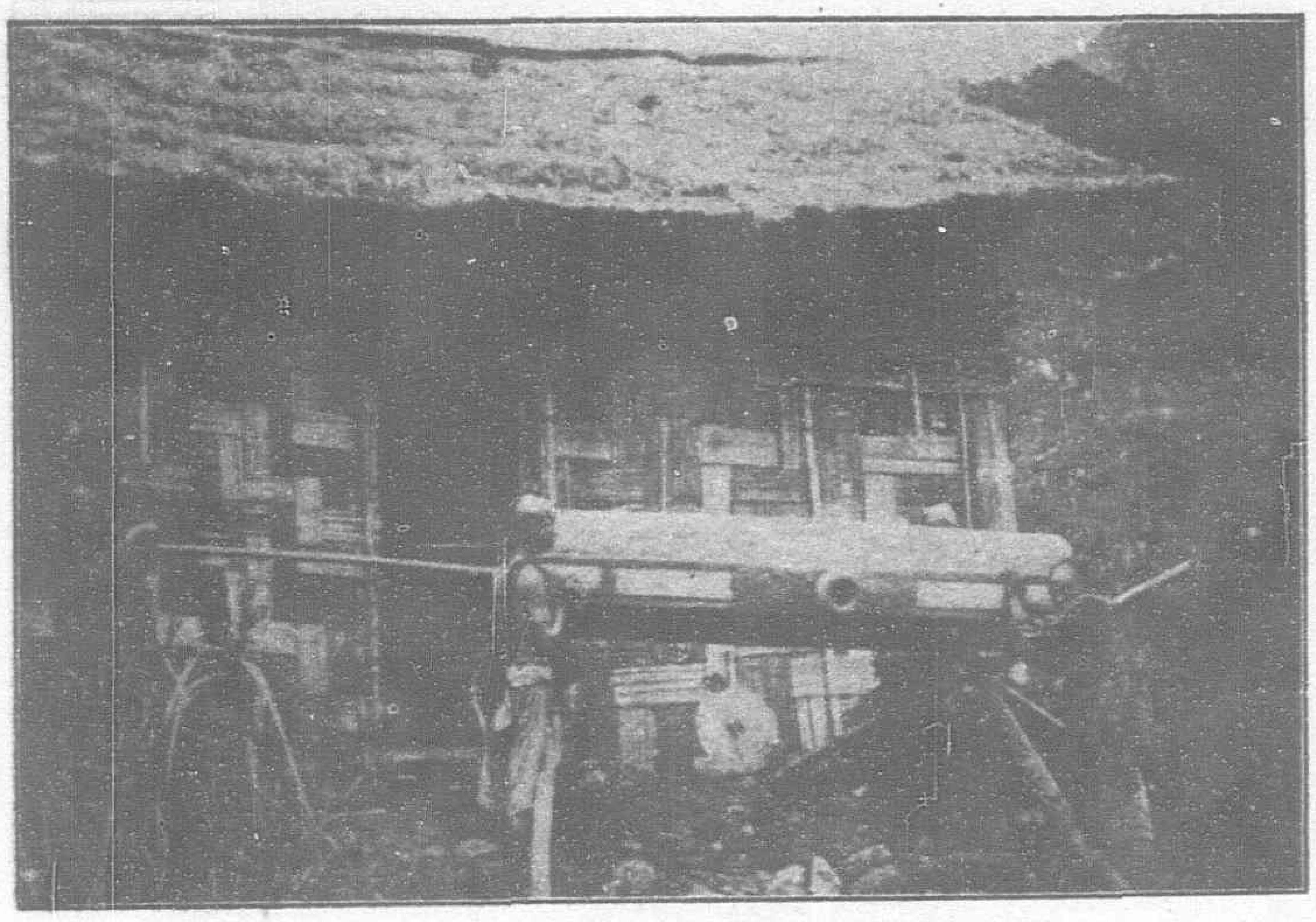
Since I have not seen enough of the Blat tin field, near the east coast, to warrant any remarks on it here, I will pass to the Main Range. There have been some other tin mines, worked by Malays and Chinamen, in the Telom District, between Raub and Batu Talum, and at Tras, while at Bentong there have been extensive open-cast mines. There is a proposal afoot to dredge the Telemong for tin ore, and work is contemplated on a large scale in the Sempan valley near Tras. Again, there are Chinese mines between Bentong and Tras, and a small mine at Lirai.

The tin ore found in the Main Range is all, with the exception of that on Gunong Gapis, won by native tributers, or by natives working independently on a very small scale, which means that the eyes are being picked out of the country. But, however much this is to be deprecated, transport is so difficult that while there are more accessible tin fields, capitalists cannot be expected to invest money in developing the resources of these mountains, and it must be conceded that the natives are useful as prospectors. The danger of such operations is that of spoiling mining propositions which might keep alive for a long period settlements that otherwise could look for only a short period of prosperity.

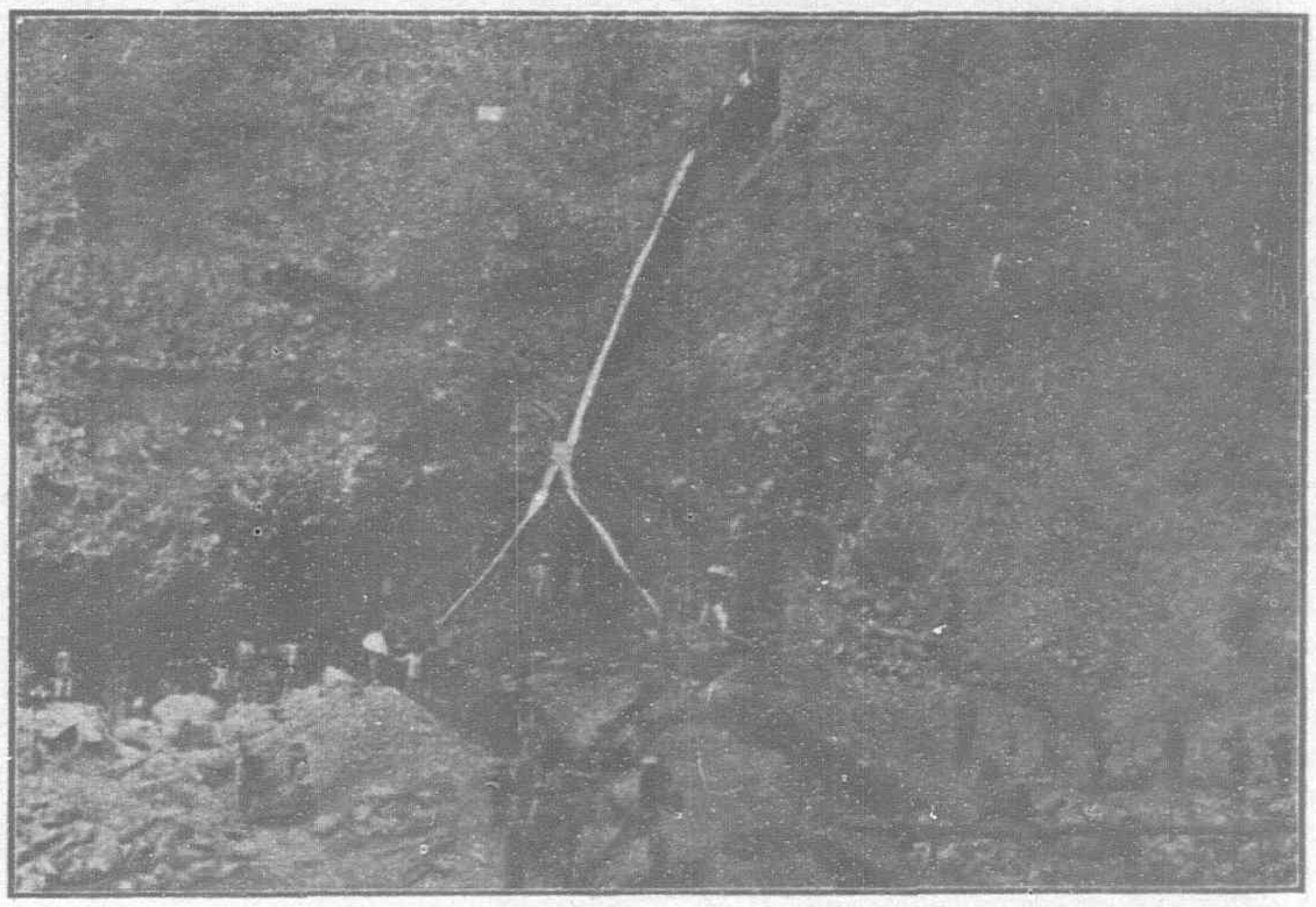
The workings consist almost exclusively, as far as I am aware, of lampans—that is, mines where the ore is washed by bringing water to it—and scratchings under boulders in river beds. Owing to the carelessness of the miners the latter method not seldom brings about fatalities.

The ore is both alluvial and in granitic rocks. There are some occurrences, however, that deserve fuller notice.

In the valley of the River Chinchong, in the



BELLOWS USED AT A SMELTER

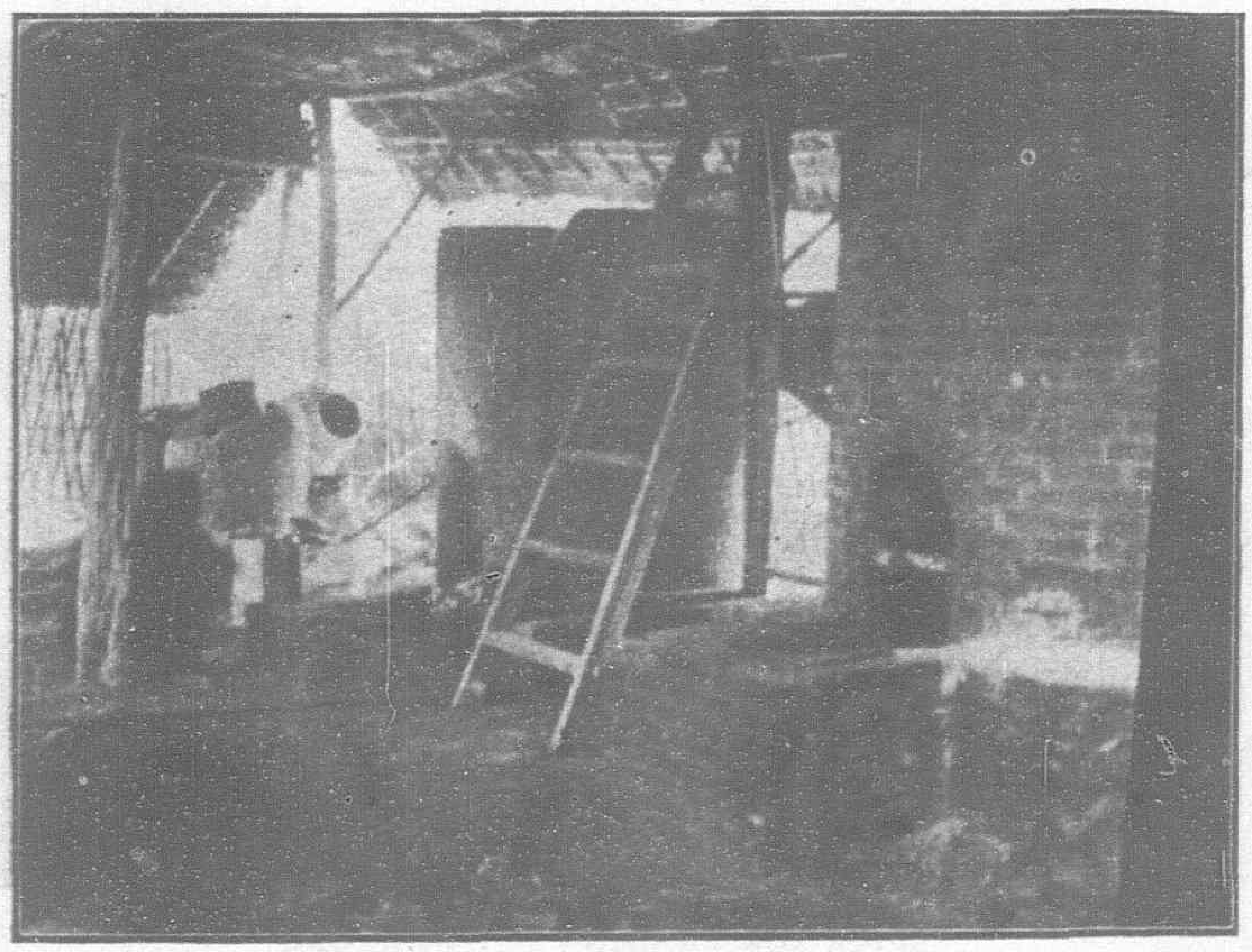


GRAVITY SLUICE FOR WASHING ORE

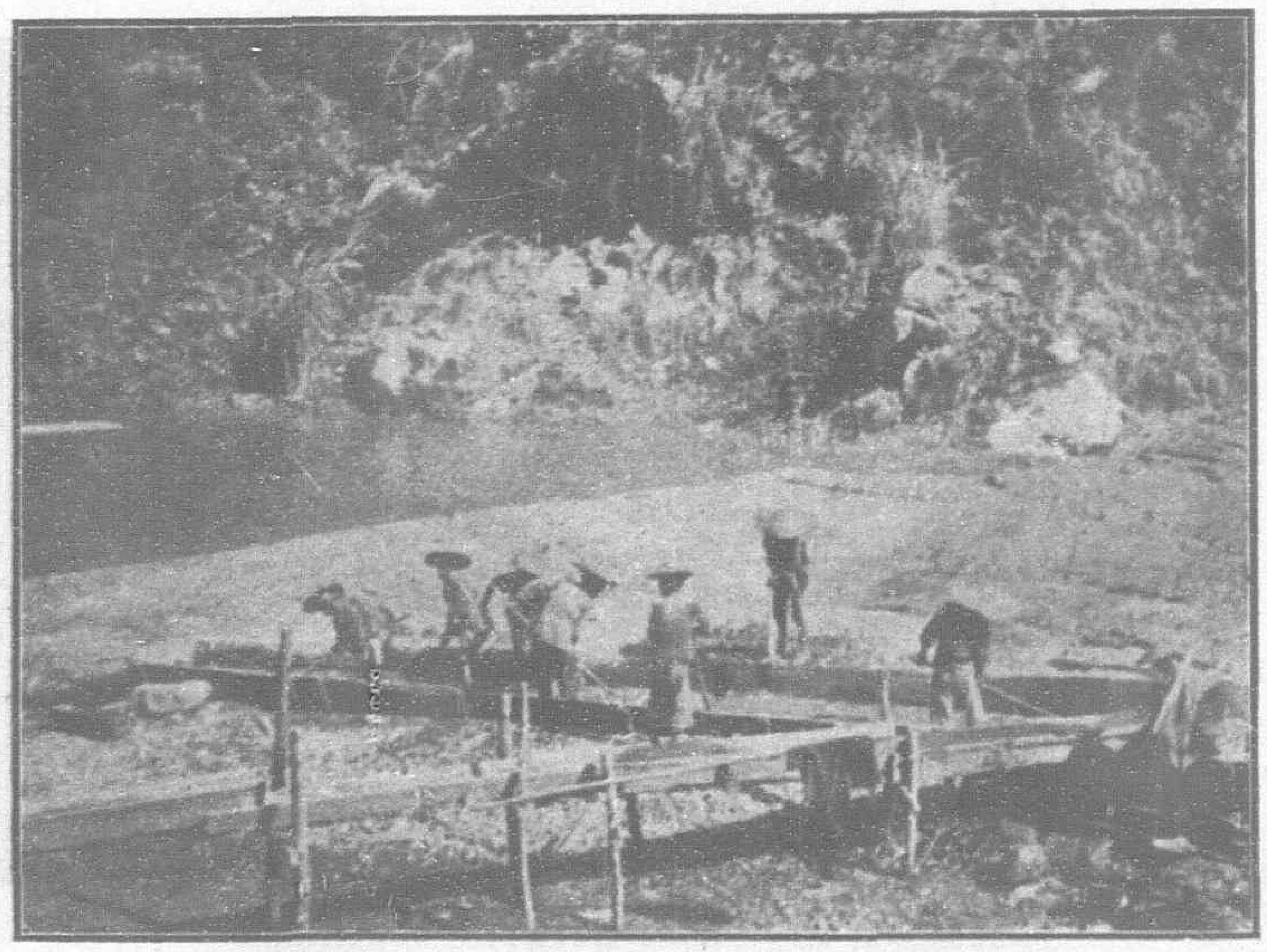
hills behind Bentong, sluicing operations have cleared a large area of ground and laid bare an innumerable quantity of granitic boulders with others consisting of a most remarkable rock which is doubtless the source of much of the alluvial tin in the valley. This rock is composed of quartz, topaz, and cassiterite. An analysis of a fair specimen gave 7 per cent cassiterite and 7 per cent topaz, but in some boulders the percentage of cassiterite is higher. All these minerals are of about the same grain. The cassiterite occurs in brilliant little crystals easily discernible to the naked eye. In a hand specimen it is not easy to distinguish the topaz from the quartz without knowing it is present. Under the microscope it shows crystal outline. A weathered rock similar to this was being worked in situ when I was there. Boulders of a rock containing mica instead of cassiterite occur also.

At the present time a little of this stone is being crushed with hammers and washed. I do not make any attempt to estimate how many tons there are on the surface, but the amount is sufficient to justify thorough prospecting with a view to working the rock in situ. Similar stone, I am told, occurs in the River Pengoring.

In the Ulu of the River Kenong tributers are working angular ore of greatly varying grain, which is sometimes found in small lodes. One specimen was sent to me, showing a lode with greisen walls. Here, again, is a property that calls for efficient treatment of known resources, and a search for ground which in this case might be worth quarrying, if not worth mining. When I was there the tributers were picking out the rich spots.



BRICK KILN FOR SMELTING ORE



WASHING ORE AT FOOT OF GRAVITY SLUICE

On the top of Gunong Gapis, at about 2,400 ft., is a mass of soft pegmatite carrying tin as a dissemination, and also in small leaders and pockets with tourmaline and quartz. In two cases leaders were seen which had the tourmaline and tin ore on one side, the quartz, with a little tin ore, on the other. Here, unlike the Rivers Chinchong and Kenong, there is a great scarcity of water. The deposit is worked by the Sempan & Gapis Tin Mining Syndicate.

Near Bukit Fraser (4,000 ft.) the Sempan Tin Mining Company holds a large area of land, worked on tribute, which extends almost as far as the Raub Power Station. Close to the manager's house is a mass of ore in granite consisting of quartz, tourmaline, and cassiterite. There is reason to believe that it has a lenticular form, but owing to the Chinamen only taking out stone that can be easily worked there is not very much to be seen. Similar, but smaller, bodies occur hard by, and there is also stanniferous pegmatite in the vicinity.

Native lampans are in operation in the Liang valley.

Not having done any extensive prospecting in the Main Range myself, I am, of course, unable to assert that there are propositions worth being worked on a large scale. I am of the opinion, however, that these hills in Pahang are such as demand careful prospecting with a view to doing more than flooding the valleys with Chinese tributers.

TIN MINING ON THE WEST OF THE DIVIDE

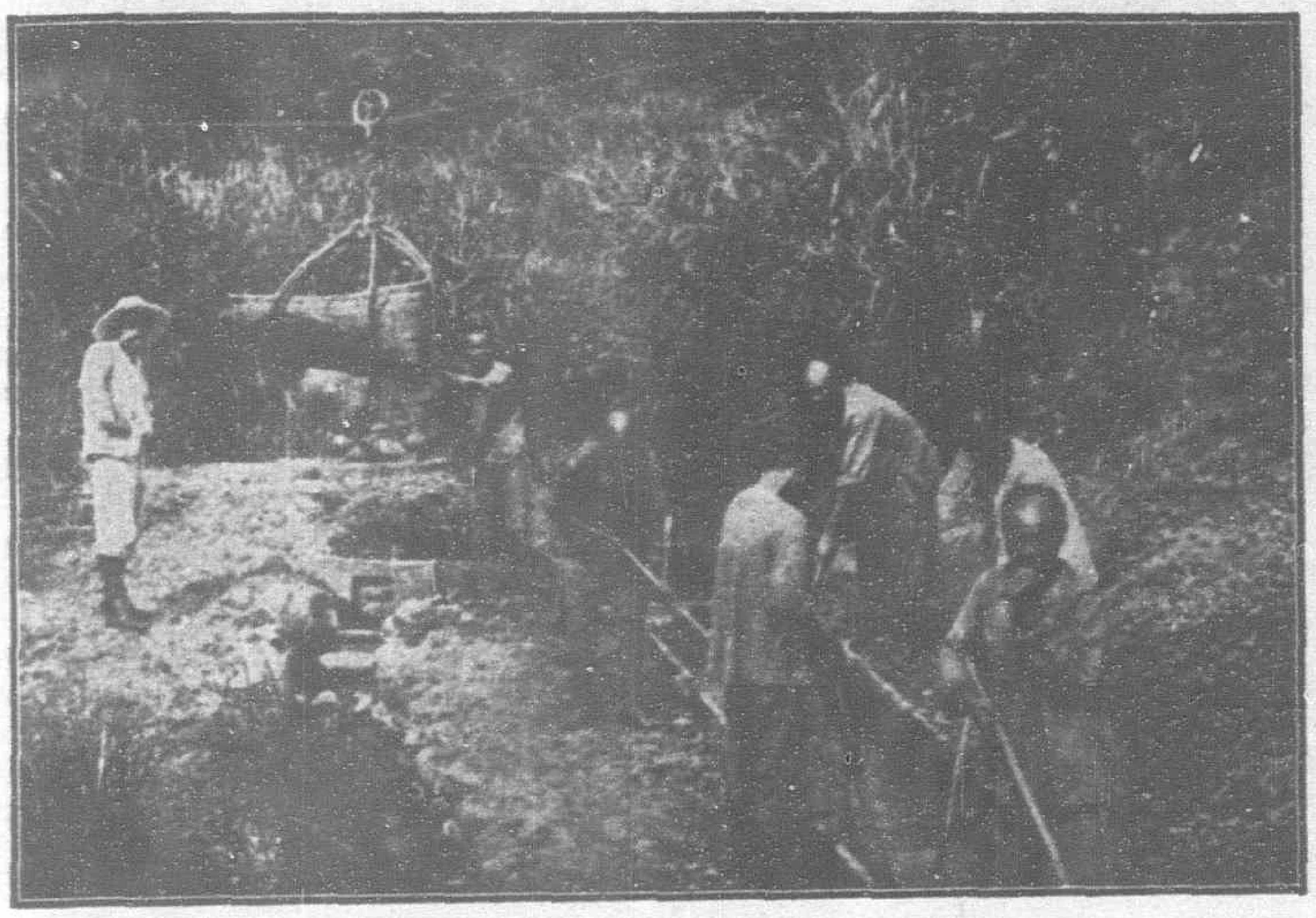
On the west side of the Main Range increasing attention is being bestowed on the development of propositions where the tin ore is still in the position it occupied when it first came into being as cassiterite. It is chiefly with such deposits that I propose to deal with as follows:—

MALACCA

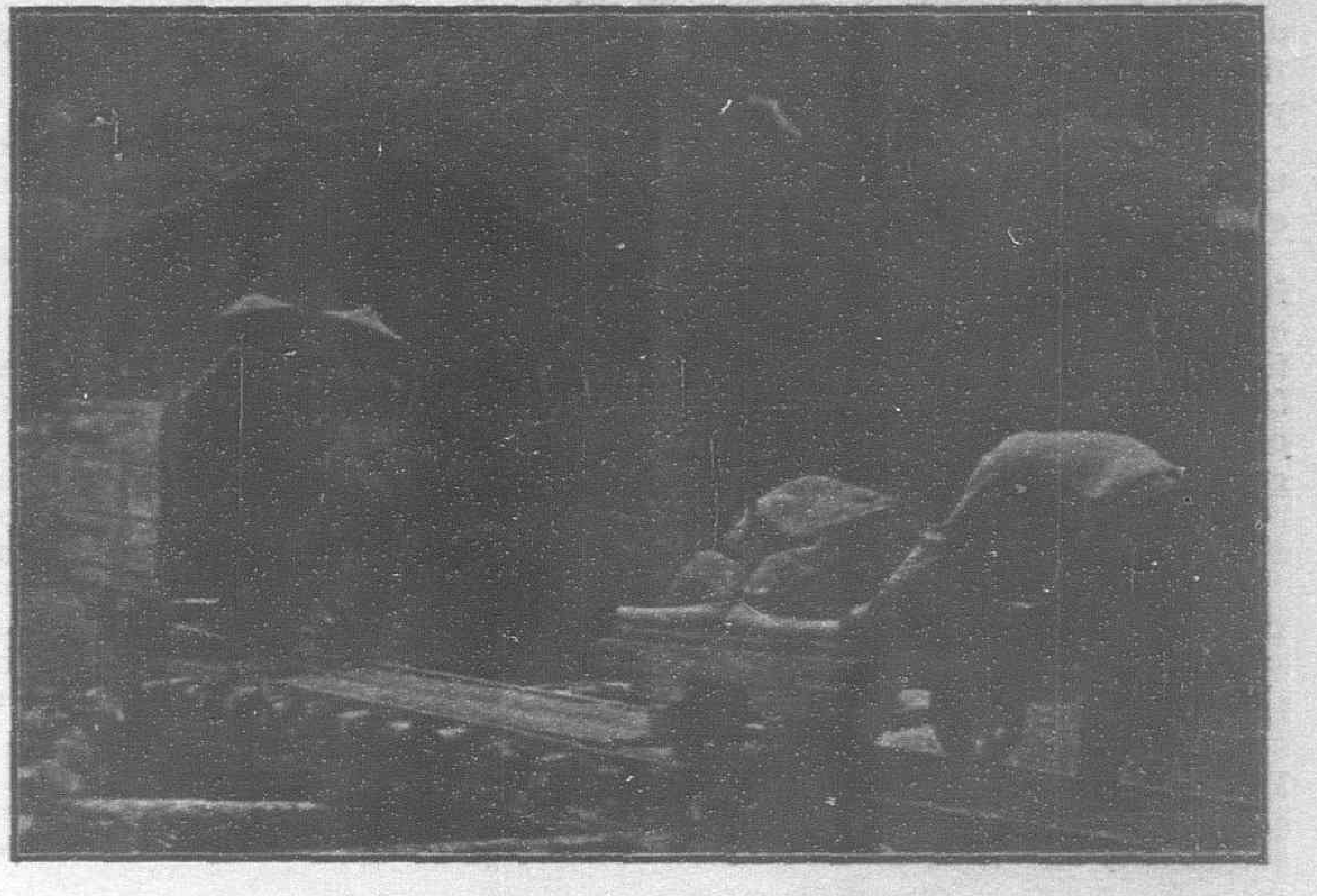
I have had an opportunity of examining two interesting tin deposits in Malacca—one at Chin-Chin, the other on the coast at Tanjong Serai, near Kuala Linggi.

At Chin-Chin the surface is gently undulating and covered with a thin cap of soil with laterite and tin ore. The country underneath is schistose. Some fairly fresh phyllites were seen. The ore is always sharply angular and varies greatly in grain, from minute particles up to large blocks of several katis in weight. At the time of my visit a little prospecting was being carried on by white men. For the rest, all the work was being carried on by Malays and Chinamen. There was no attempt at classification. Towkay Chwee Lim was working on a big face which he had to blast owing to cementation by iron, which extends down to the schists. The same Towkay was boring into the soft schists. Very little can be seen of the bedrock at Chin-Chin, but the evidence on the surface points to the existence of small lodes in the country over a wide area. The boring operations just mentioned might possibly strike such a lode, but they were not instituted with that object. Should a mining engineer think it worth while to prospect with a view to developing possible lodes, the obvious course would be to strip the surface where the natives have found most tin ore, and especially in the vicinity of the large blocks. The scarcity of water and abundance of laterite would present obstacles to hydraulic operations and so also, I imagine, would the configuration of the ground.

Near Tanjong Serai prospecting has been carried on for some time with a suction-dredge on a deposit of tin ore below low-tide mark. At Tanjong Serai laterite replacing schists occurs; at Tanjong Miriam Patah pegmatite is covered by a band of vesicular laterite and white earth. Some specimens from the dredge point to the tin ore occurring chiefly as a dissemination in pegmatite, but as there is very little in the way of corroborative sections to be seen on land, the evidence is not strong. The bulk of the ore taken so far, which gives a high assay value, comes from a thin covering of black mud forming the sea bottom. It may be safely presumed that this tin-bearing mud is the result of the gradual concentration of the surface of the stanniferous pegmatite by the action of the tides, probably complicated by another movement of the sea water. I am told that Malays have for years washed tin ore from the sea bottom, not only between the two capes named above, but farther to the south.



BASKET TROLLEY FOR CONVEYING SLUICED ORE



TRANSPORTING ORE TO THE SMELTER

THE BRUSEH STOCKWERK

No mining company in these States has had a history so nearly approaching to romance as the Bruseh Hydraulic Tin Mining Company, whose property is of great interest both geologically and as a study of method.

My first visit to Bruseh was in December of 1903, at which time work had not long ceased in the Gomorrah valley, where on a bedrock of schists the soil had been foundto be stanniferous. Some granitic rocks were seen with the schists, and also two strong quartz reefs, on the top of one of which quantities of coarse tin ore were found. No ore was visible in the reef, and it is supposed that it had acted as a riffle against the tin ore slowly descending the hillside with the soil. Gold had been found in the vicinity. Work was in progress in the valley of the River Pinang, where masses of laterite, which also occurred in the Gomorrah valley, proved a serious obstacle to hydraulic mining. On the River Durian natives were sluicing tin ore. At Changkat Garam, Old Bruseh, a junction between sandy schist and pegmatite was visible. From the latter tin ore was being extracted by an old Malay, who stated that no tin ore occurred in the schist. In the pegmatite the tin ore occurred both in veins with iron oxides and as a dissemination. At Old Bruseh proper was a fine example of schorl rock, which later on was found to contain pockets of tin ore as an original constituent, together with some sulphides. I was informed that natives had found rich patches of tin ore at about 15 ft. below the surface, while on the surface stringers of iron oxides and tin ore had been worked by natives also. At the time of my next visit, in July 1904, preparations to work the schorl rock at Old Bruseh had been instituted, but were ultimately abandoned. The pegmatite at Changkat Garam had been partially worked away by a monitor. It was found worth working only where deeply colored with iron In the Relau valley work had progressed, and another strong quartz reef laid bare, against which was found tin ore in larger quantities than usual. Schists again formed the bedrock, and in them were abundant veinlets of soft white clay, sometimes containing tourmaline. Small lenticles of quartz in the schists were abundant, and small stringers with good crystals of tin ore had been found also, both in the schists and in the white clay.

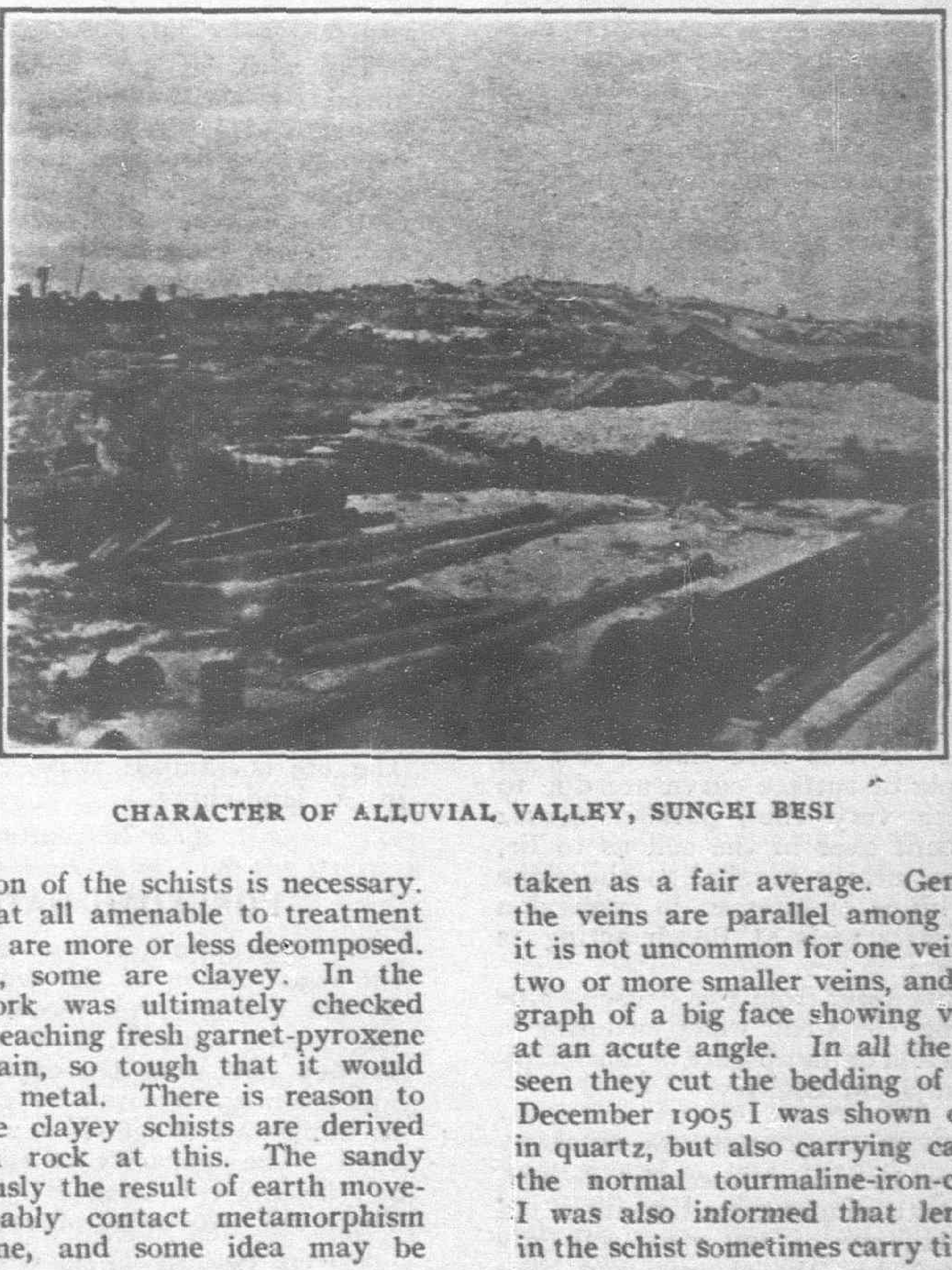
Prospecting on another face was in progress higher up the valley, where I saw a sample of decomposed schists washed with negative results, but it is noteworthy that the idea had then taken root that the tin ore in the soil came from the schists underneath and that it might be worth extracting it. At this time the affairs of the company were not satisfactory.

I was at Bruseh again in December 1904, by which time a startling development had taken place, owing to the heroic measures taken by the company at the advice of Mr. W. D. O'Brien. Evidence had accumulated of the existence of small lodes in the schists, and abandoning any further attempts to work the soil, the monitors were used for prospecting, and turned on the schists, with the result that there was discovered a system of thin tin-bearing veins which has proved a valuable asset to the company.

In order to appreciate the difficulties to be overcome in winning the tin ore from these veins, a description of the schists is necessary. Where they are at all amenable to treatment by monitors they are more or less decomposed. Some are sandy, some are clayey. In the Relau valley work was ultimately checked by the monitors reaching fresh garnet-pyroxene schist of fine grain, so tough that it would make good road metal. There is reason to suppose that the clayey schists are derived from some such rock at this. The sandy schists are obviously the result of earth movements and probably contact metamorphism too, on sandstone, and some idea may be gathered of their nature when I mention that it often happens that a fresh face has to be left a month or more to weather before the monitors can make any useful impression on it, working at 140 lbs. pressure with a 3-in. nozzle. The monitors have also to be assisted frequently by blasting.

At the present time the workings at Bruseh are confined to the hill separating the River Pinang from the River Durian. On the River Durian side a huge pit has been excavated with an outlet into the valley and a face 230 ft. high. The ridge connecting with the work on the Pinang side has been broken through.

The tin-bearing veins are numerous and generally rich in tourmaline, which extends for some inches from the fissure, the latter being in some rare cases almost completely filled with cassiterite over a portion of their length. I have a specimen in my collection of a solid slab of cassiterite with iron ore representing the contents of a vein without the walls. The greatest thickness of the slab is 2 ins., and it shows that smaller veins of cassiterite branched off into the schist. The veins vary in thickness considerably, but an inch may be taken as a fair average. Generally speaking, the veins are parallel among themselves, but it is not uncommon for one vein to split up into two or more smaller veins, and I have a photograph of a big face showing veins intersecting at an acute angle. In all the sections I have seen they cut the bedding of the schists. In December 1905 I was shown other veins, rich in quartz, but also carrying cassiterite, cutting the normal tourmaline-iron-cassiterite veins. I was also informed that lenticles of quartz in the schist sometimes carry tin ore.



CHARACTER OF ALLUVIAL VALLEY, SUNGEI BESI

In the River Durian valley the veins are now exposed along a high face,roughly 300 yds. long, trending N.N.W.—S.S.E., and it is remarkable that the extent of the veins worth working is at present limited by the extent of the sandy schists. When the clayey schists are encountered veins are less numerous and more minute, while such tin ore as they contain is finer than in the sandy schists. At Pantai, near Kuala Lumpur, I once saw a very clear section of interbedded shale and sandstone showing tin ore "making" strongly in the sandstone and hardly at all in the shale. I do not argue from this that, as a general rule, tin ore should be searched for in sandstone in preference to argillaceous beds.

The average yield of the ground at Bruseh containing these veins is estimated at ½ kati per cubic yard. A little wolfram is found.

Apart from the difficulties of effecting a fall of the schist face, great trouble is experienced on account of the blocks of laterite that come from the soil. When last at the mine a big fall of tin-bearing ground had occurred, but the quantity of laterite that fell with it was so great that it was expected eight weeks would be spent in clearing it away before the pay dirt could be washed into the riffle-box.

THE JEHER HYDRAULIC TIN MINING COMPANY

The operations carried on by the Jeher Hydraulic Tin Mining Company near Tanjong Malim resemble in some respects those at Bruseh. It was known that Chinamen had obtained quantities of tin ore by shallow shafting along a line over the back of a low hill. They had come to an end of what was to them profitable ground, and had abandoned their shafts. Further examination proved, however, that these shafts had been sunk along a band of soft sandstones and shale country traversed by numerous veins of quartz carrying coarse cassiterite. Monitors were brought to bear, and by the aid of blasting it has been possible to work down on these veins in an open cut for about 40ft. below the surface of the bedrock.

The band of country along which the veins occur trends roughly east and west and underlies slightly to the south. I understand that 20 ft. is the greatest thickness of the band discovered so far. This was found at the top of hill. Mr. René Proust, formerly manager of this property, estimates the total distance through the hill from the spot where operations were commenced on the east to where soil is now being worked by monitors on the west as 1,000 ft. The height of the hill above this base was originally about 250 ft. At the east end, close to the lowest part of the open cut, a shaft was sunk for 60 ft. and a crosscut proved the continuation of the quartz veins. Tin ore was found, but not in any great quantity, which, in fact, was not expected, since the shaft was not near the best tin-bearing ground.

In addition to the quartz veins, other veins traverse the sandstone and shale. At the east end of the open cut is a vein or dyke of quartz with tourmaline and muscovite. Elsewhere in the open cut are veins of mica, some being lepidolite; stringers of white mica with cassiterite, and sometimes pyrite; and also veins of quartz and kaolin with long prisms of tourmaline.

On the west side of the hill the tin-bearing quartz veins have been lost. On the north a large amount of tin-bearing soil has been stripped laying bare sandstone and shale traversed by numerous small veins of quartz carrying a little cassiterite. It was here that I saw an excellent example of surface curvature due to soil-creep. Three very thin, parallel quartz veins were so bent over in the soil as to lie, near the surface, nearly parallel to the slope of the hill. This is of interest in connexion with the big quartz reefs at Buseh acting as riffles.

The Jeher veins differ from the Bruseh veins chiefly in having clean-cut walls enclosing a gangue of quartz and in the absence of tourmalinisation of the adjacent country.

THE SERENDAH HYDRAULIC TIN MINING COMPANY

This company has been recently floated, and is working with monitors on the site of old lampans. At the time of my visit soil only was being worked, but the country had been bared and was seen to consist of soft granitic rock with a few veins of quartz carrying a little tin ore, and veins of a granite modification resembling greisen, also carrying tin ore. In No. 1, the biggest working, these veins have a general north and south direction.

In an adjacent working is what has already come to be referred to as "the lode." This appears to be a repetition on a large scale of the veins of a granite modification mentioned above. The direction is about W.N.W.—E.S.E. The underlie is not clear. It stands up like a dyke in soft pegmatitic granite. The length of the outcrop is about 150 ft., the breadth between 20 and 30 ft. It is a granite modification comprising quartz, white mica, tourmaline in small masses of needles that give the rock a spotted appearance, kaolin, and cassiterite as small crystals. The cassiterite sometimes occurs in quartz, sometimes in masses of mica, and appears to be an original constituent of the rock. The last point is not clear, however, since I only saw one or two specimens, and saw no tin ore in situ in the outcrop. Mr. Proust, now managing this company's land, informed me that three pikuls of ore had been handpicked from the rock. Experience elsewhere shows that tin-bearing granite modifications such as this are very uncertain in their behavior. At Bruseh some expense was incurred before it was discovered that there was only a small bunch of cassiterite crystals to depend on. On the other hand, at Salak South there is a mine in tin-bearing pegmatite of phenomenal richness. At Tanjong Rambutan similar dykes of granitic rock have proved, so far, not worth working.

TIN ORE IN LIMESTONE

Perak is remarkable for the discovery of payable deposits of tin ore in limestone. Elsewhere, tin ore in limestone has been found with iron in Tuscany; and Mr. Sydney Fawns* mentions occurrences in Maine, U. S. A., where small veins containing cassiterite, fluorite, mica, quartz, and mispickel, traverse impure limestone. In the former case the ore has been worked.

There are five localities in Perak where mining is or has been carried on in these deposits. They are: Changkat Pari, near Ipoh; Ayer Dangsang, near Lahat; Siak, near Siputeh; Jesophat's Valley, Sungei Siput, Kuala Dipang; Lahat.

CHANGKAT PARI

The work at this mine has been pushed ahead by the sublessee, Towkay Foo Choo Choon, and a big shaft has been sunk on the deposit to a depth of about 100 ft. The ore body is roughly elliptical in horizontal section, and has proved very rich in cassiterite: how rich may be judged from the fact that the manager, when conversing with me, deplored being able to obtain 5 per cent only of tin dioxide in the bottom of the mine. There are no distinct walls to the deposit as a whole, but a line can be distinguished between the calcite associated with the irregular masses of cassiterite and the crystalline limestone country. A typical specimen of ore shows a mass of calcite crystals enclosing short prisms of dark brown cassiterite, pyrite, arsenopyrite, chalcopyrite, and bornite. Mr. Penrose—"Chicago Journal of Geology," XI., p. 135, 1903—mentions rhodochrosite. I have failed, so far, to detect any tourmaline, fluorite, or quartz. Some microscopic slides showed chlorite. The manager contemplates driving out from the shaft. The ore is stamped, roasted, and then washed in a land-chute.

(*To be continued.*)

HONGKONG WATERWORKS

No appropriation was made available for the construction of the second section of the Tytum Tuk reservoir recently proposed by the Legislative Council at Hongkong as it was decided that since the capacity of the system was recently increased by 230,000,000 gallons, no immediate danger of a water famine threatened. The capacity of the storage reservoir at the present time is 350,000,000 gallons, There are two miles of catch water channel, three filter beds with a capacity each of 500,000 gallons a day. There is also a service reservoir holding 2,000,000 gallons. This proposed second addition provides for the construction of a dam across the shallow head of Tytam Bay and form a monster reservoir with a capacity of 1,200,000,000 gallons which would almost double the present capacity of the reservoirs. It is estimated that the completion of this project would take at least five years. The *Government Gazette* for June contained an advertisement for the building of a dam at Tytum Tuk and the construction of other contingent works. Commenting on the proposed addition the *China Mail* of recent date declares that this work will constitute the most important section of waterworks expansion in the history of the colony. Continuing the *Mail* describes the scheme as follows:

"And now we come to the work for which tenders are being asked and which is to put an end to our water troubles. It is proposed to construct a dam 60 feet high across the shallow head of Tytam Bay and thus to form a reservoir of 1,200 million gallons' capacity, our existing five reservoirs under the best of circumstances contain only 747 million gallons. A trench will first be dug through the mud and sand to hard ground, in some places 60 feet below low water level; this trench will be filled with cement concrete and above it an earthen dam will be built similar to that at Pokfulam but with a cement concrete core in continuation of the cement concrete filling of the trench. The toe of the bank will be protected on the sea side by a substantial stone wall. The water from this reservoir will be raised to the Tytam Tunnel by the pumping plant already mentioned which will be greatly reinforced.

"The dam is expected to take five years to construct, and we think we may now with safety congratulate the Government on having put the Colony on a fair road towards the solution of the water question and the abolition of the annually recurring water famines which have been a source of reproach to us for so many years."

The following history of the development of the Victoria water supply system is of interest demonstrating as it does the difficulties overcome by the colony since the year 1863 when the first plan of any magnitude was put into effect.

Prior to the year 1860 the water supply of Victoria—there was then no Peak District—was mostly obtained from the streams flowing down the northern slope of the hills immediately above the city. The requirements in those days were small, the population of the city amounted to 50,000 and the boating population was estimated at 15,000. An early stoppage of the summer rains in 1858 found the supply inadequate for even these small numbers, and the first scheme of any magnitude for the supply of the city was consequently undertaken, and was completed in 1863. This project comprised the building of a small dam or "intake" on the stream above Pokfulam village, just below the present Pokfulam reservoir, and the laying of a 10 inch pipe to the city, it provided practically no storage and was soon found inadequate to the demands.

The next work taken in hand was the building of the Pokfulam Reservoir, this was carried out between 1866 and 1871. The dam is an earthen one, about 50 feet high, and forms a reservoir of 68 million gallons' capacity with a catchment area of 416 acres and top water at 554 feet above sea level. About this time intakes were also constructed on the Tai Hang and Wongneicheong streams, at the east end of the city.

The 10-inch pipe already mentioned conveyed the water to "No. 1 Tank" (now dismantled) at Breezy Point just above the Ho Min Ling Hospital. The built area of the city soon extended above this level and the difficulty of supplying these upper levels brought about the building of the Pokfulam Conduit, superseding the 10-inch pipe in Pokfulam road and delivering the Pokfulam water in Glenealy at about 500 feet above sea level. This work was completed in 1877 under the supervision of the well known engineer Mr. W. Danby.

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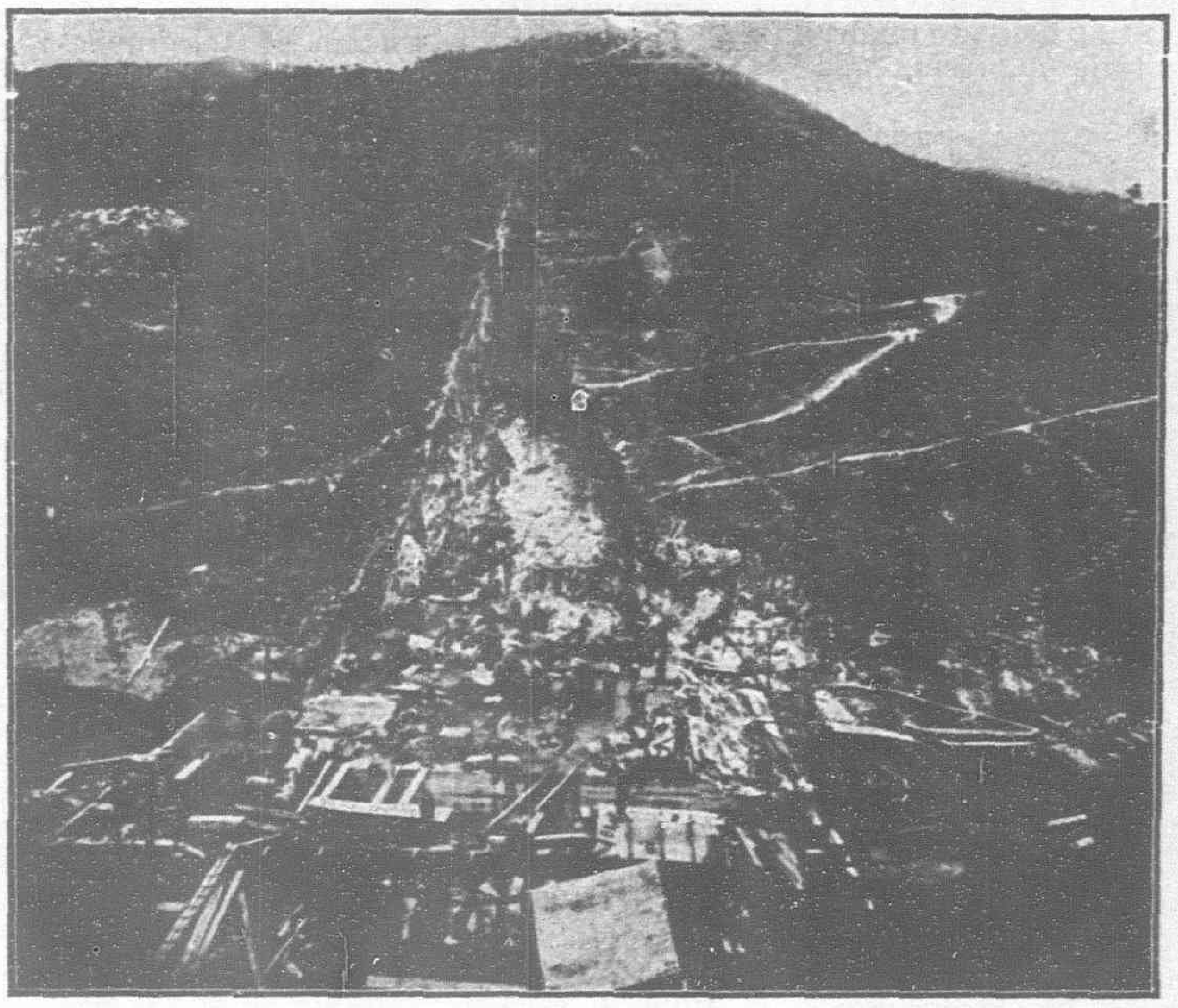
* "Tin Deposits of the World," p. 158.

The following is a table showing the rapid growth of the population of the city which has led to the continuous extension of the waterworks.

	Civil Population of Victoria
1860	68,910
1871	83,014
1881	106,393
1891	136,901
1901	181,918



LAYING THE PIPE LINE THROUGH HILL AT TYTAM BY MEANS OF TUNNEL

SITE OF PUMPING STATION ON TYTAM BAY, THE HEAD OF WHICH HAS BEEN DAMMED

It will easily be seen from these figures that anything in the shape of finality in the construction of works could scarcely be expected, and it was not many years before the Tytam scheme was taken in hand. This scheme owed its inception to Mr. J. M. Price, then Surveyor General, and it was carried out during the years 1883-1889 by Mr. James Orange and included the construction of an impounding reservoir in the Tytam valley of 312 million gallons' capacity with a catchment area of 680 acres and top water level 496 feet above the sea, the water is conveyed—first by means of a tunnel a mile and a half long and then by 3 miles of conduit—to the Albany, where filter beds and a service reservoir were constructed.

The prospect of a largely increased supply rendered desirable the passing of regulations for the equitable distribution of that supply, and in 1890 the first Waterworks Ordinance was passed, the original draft containing the proviso that all services laid into private premises should be metered. Unfortunately. the erroneous notion that the "big reservoir at Tytam" would solve the water question for all time had gained firm ground in the popular imagination, and the bill was amended in Legislative Council with the result that services were laid into all houses and no adequate restrictions placed on the use or waste of water.

The Pokfulam water had, so far, been supplied unfiltered. During the winter this caused little or no inconvenience, but in summer the water was often highly charged with sediment. This was remedied by the construction, in 1890, of the West Point Filter Beds and Service Reservoir. At the same time it was found necessary, in view of the increased supply rendered available by the Tytam Works, to reorganize the distribution works in the city. These works, including the provision by pumping of a supply to the Peak, were carried out in 1890-92.

The mistake of placing no restrictions on the consumption soon bore fruit. The Tytam works cost 1¼ million dollars, but, within two years of their completion it was found necessary to resort to the intermittent system of supply for several months in the winter. A similar scarcity, though less severe, occurring in 1893 and 1894 it was decided to raise the Tytam dam 10 feet, an operation which had been contemplated in its original design. This work was carried out in 1895-6, giving an additional storage capacity of 96 million gallons. By a curious irony of fate, there occurred in 1895—when the dam had already been raised 5 feet—one of the lowest summer rainfalls on record and Tytam did not fill even to its original level. This led to the commencement of a scheme of catchwaters for the purpose of increasing the catchment area of the reservoir.

Given above is a table showing the rapid increase in the population of the city, to meet which, extensions of the Waterworks were from time to time undertaken, but unfortunately, generally after the increased demand and not in anticipation of it, with the result of a fairly regular winter's shortage of water as is shown in the following table:

1891	supply intermittent	February	May
1893	"	March	April
1894	"	March	May
1895	"	April	July
		and Oct.	Dec.
1896	"	Jan.	March
		and part of	June
1899	"	April	June
1900	"	May	
1901	"	Nov.	Dec.
1902	"	Jan.	May
		and Nov.	Dec.
1903	"	Jan.	April
1904	"	Jan.	June
1905	"	March.	

"This inadequacy of the supply," says the *China Mail* of 13th December, 1902, "was first brought seriously into prominence in 1895, when an exceptionally low summer's rain failed to fill Tytam reservoir, and as a consequence the intermittent supply was introduced in October. This produced considerable public agitation and resulted in a report on the water supply of Victoria by Mr. F. A. Cooper, then the Director of Public Works. On the strength of this report the Wong-nei-cheong Gap Reservoir and the Tytam catchwaters were made, but nothing more was done than Mr. Cooper considered to be necessary for what were then (1896) the present requirements. For future requirements Mr. Cooper had advised the building of three additional reservoirs in the Tytam catchment area and an additional reservoir at Pokfulam."

With the exception of commencing a small additional reservoir below the Byewash at Tytam to contain 26 million gallons, matters were allowed to drag on till another exceptionally low summer's rainfall—1901—produced a disastrous water famine, and in the spring of 1902 the scarcity of water had come to such a pass that it was found necessary to convey water to the city in lighters from Tsun Wan, the cost of this and other temporary measures adopted amounted to $66,000. The Government then proposed drastic remedies, and in 1902 a bill was introduced and passed providing that all tenement houses should obtain their water from public taps. The Secretary of State however disallowed the Ordinance, and on the advice of Mr. Chadwick, consulting engineer for the Crown Colonies, another Ordinance was passed providing for the control of the water supply to most of the city by a system of "rider-mains" and for the introduction of meters on all services connected with the principal mains. Mr. Chadwick also advised that instead of constructing further storage reservoirs within the catchment area of the Tytam Reservoirs, as recommended by Mr. Cooper, a scheme should be prepared for developing the lower levels of the Tytam Valley from which all the water would have to be pumped. In making the necessary surveys for this scheme it soon became obvious that works of considerable magnitude, which would take many years to carry out, would be required, and, even with the control of the supply to be effected by the introduction of the rider-main system, it was recognized that further storage works and sources of supply were an urgent necessity. A temporary pumping plant capable of raising half a million gallons a day was therefore erected at the fork of the Tytam stream about a mile above the village of Tytam Tuk for pumping the water from that stream up to the level of the Tytam tunnel, but, in the absence of a storage reservoir the amount available was practically limited to the daily delivery of the streams, the headwaters of which were intercepted by the Tytam catchwaters and dam.

This pumping plant was erected in 1903, and in the following year the Government, acting on the advice of Mr. Chatham, Director of Public Works, commenced the construction of a reservoir of 210 million gallons' capacity with overflow level 200 feet above the sea on a site which had been suggested in Mr. Cooper's report of 1896. The work involved the establishment of a permanent pumping station and the laying of a rising main to convey the water into the Tytam tunnel, where it will merge with the gravitation supply from the existing works, and it was decided to construct these so that they would form part of the large scheme to be undertaken later. Consequently the pumping station was located on the shores of Tytam Bay, and, as it was necessary that the rising main should be clear of the future low-level reservoir, a new road was constructed from the Stanley gap near Tytam Bay to the tunnel entrance, with a branch road to the pumping station. Two sets of pumps, each capable of raising 1¼ million gallons a day up to the Tytam tunnel, were obtained. An 18 inch suction main was laid from the Reservoir to the pumping station and an 18 inch rising main from the pumping station up to the Tytam tunnel, a distance of nearly two miles. Provision was also made for duplicating the rising main at a future date, the road work being designed with a view to this, and the pumping station buildings were designed with a view to their future extension.

DALNY DOCK AND RAILWAY

Vice-Consul Charles Lyon Chandler, writing from Dalny, tells of the opening of the Dalny dock to vessels of all nationalities and of the proposed improvements of the South Manchurian Railway. He says:

The Dalny dock was transferred April 1 from the Japanese ministry of the navy to the South Manchurian Railway Company, and is now open to vessels of all nationalities. Though the dock can only accommodate ships of 2,600 tons burden at present, it is proposed to complete the work begun by the Russians and so enlarge it that it may accommodate 20,000-ton vessels. The docking charges are as follows:

For the first three days (but no reduction made for a vessel staying less than three days) for vessels under 300 tons, 500 yen (yen=$0.498 United States currency); 300 to 400 tons, 520 yen; 400 to 500 tons, 540 yen; 500 to 600 tons, 560 yen; 600 to 700 tons, 580 yen; 700 to 800 tons, 610 yen; 800 to 900 tons, 640 yen; 900 to 1,000 tons, 670 yen; 1,000 to 1,200 tons, 700 yen. For vessels of over 1,200 tons, 50 yen for each additional 100 tons. For the fourth day and for every day thereafter: For vessels under 300 tons, 50 yen; 300 to 400 tons, 55 yen; 400 to 500 tons, 60 yen; 500 to 600 tons, 65 yen; 600 to 700 tons, 70 yen; 700 to 800 tons, 77½ yen; 800 to 900 tons, 85 yen; 900 to 1,000 tons, 92½ yen; 1,000 to 1,200 tons, 100 yen; for vessels of over 1,200 tons, 5 yen for each additional 100 tons.

The chief of the marine transportation bureau of the South Manchurian Railway Company informed me that it was proposed to reduce these somewhat high charges about May 1. Any changes occurring therein will be reported. The bottom of the dock is 118 meters (meter=39.37 inches) long; the top, 126 meters. It is 21 meters broad at the middle of the top and 10 meters broad at the middle of the bottom. At its entrance the dock is 15 meters broad at the top and 13 at the bottom. The dock is 7 meters deep throughout.

SLAUGHTER HOUSE AND ANIMAL DEPOTS FOR KOWLOON

Out of the appropriations for public works at Hongkong for the year at least $75,000 will be spent in the construction of a new and modern slaughter house and animal depots near Ma Tau Kok, a site which offers the best possible facilities for adequate drainage. The sum appropriated also provides for the removal of the existing slaughter house and cattle depot located in the vicinity of Des Voeux Road, Hunghom bay. The report of the committee on public works was adopted unanimously and in addition the work was directed to be started at once and a road authorized built from the Kowloon City Road to the new buildings.

The Chairman submitted block plans of the New Slaughter House and Animal Depots for Kowloon, and explained that the removal of the existing Slaughter House and Cattle Depot adjoining Des Voeux Road, Hunghom Bay, was necessitated by the construction of the railway, and it was proposed to construct new buildings to replace them on a site near Ma Tau Kok, where the drainage, which was of a somewhat offensive nature, could be discharged into water of considerable depth. At the same time, it was proposed to make the new slaughter house more than twice the size of the present one and to add separate sheds for the accommodation of 400 swine and 200 sheep or goats, for which no special provision existed in the present depot. The shed for cattle would accommodate 120 head, being of the same dimensions as the existing cattle shed, which was, however, utilized to a considerable extent for the housing of swine, etc. It would be quite possible to defer the construction of either the swine shed or the sheep shed until some future time, as it was intended to appropriate a large area of land which would enable future extensions to be carried out.

The estimated cost of providing the accommodation stated above, including compensation to some squatters who would be dislodged, the preparation of the site and its enclosure by walls and fences, an isolation shed, the necessary offices, and repairs to an existing house to render it suitable for an inspector's quarters, was $75,000.

Referring to the contemplated transfers and the new construction in connection with the animal depots and slaughter house in his recent address to the legislative council, His Excellency The Governor said:

"Turning to other items of the public works scheme, I may refer to the animal depots at Kowloon which are represented by $52,000. These are very urgent and are necessitated by railway construction. The station yards and sidings interfere with the present site, and it is imperative that we find a new site for the depot and slaughter house. Moreover when the railway is finished in all probability a very large proportion of the railway trade will consist of cattle and sheep and we should therefore have ample room and a good shelter for them. Therefore although our present scheme is only to construct comparatively small depots we have enclosed a large area of ground in order to make further extensions when they shall be required."

SOUTH CHINA CAMPHOR

Responding to an inquiry from Seattle as to crude Chinese camphor in the Hongkong market, Consul-General Amos P. Wilder writes:

This business is mainly in the hands of five German firms. The camphor from Kwangsi Province is inferior, perhaps 20 per cent less as compared with Fukien Province camphor; in color it is markedly darker than the Fukien article, and the natives have a way of mixing it with fish and other impurities. It has become discredited, and the supply being comparatively small, apart from that consumed here or sent to India, Kwangsi camphor is not much in evidence in Hongkong at present.

The Fukien or Foochow camphor (Foochow being a central port for exportation) is also shipped from this port. In appearance it resembles the coarsest white sugar, though off in color, with the strong camphor odor. The evaporation of camphor is considerable, usually 5 and sometimes 10 per cent, and leads to disputes, making it a difficult article of commerce. Consignees claim underweight and lawsuits occur. India is a large consumer of South China camphor, Madras being a leading point; it is used in candles for illumination purposes, and the making of cordite, etc. Camphor for export is packed in tin or zinc-lined cases to avoid rust, 1 picul (133⅓ pounds) to the case, and shipments of 500 and 1,000 cases are not unusual. Camphor is never shipped in the same oriental cargo with tea. Most of the camphor from this port is shipped to New York City. [Camphor dealers at Hongkong named by the consul-general are filed for reference at the Bureau of Manufactures.]

WEST AUSTRALIA'S PEARLING

Directions have been issued to all licensing officers appointed under the Pearlshell Fishing Act of 1886 in West Australia that no license is to be granted to any person to use or employ a ship in the pearlshell fishery, if there is reason to believe that such person is, or is about to become, associated with any Asiatic or African, who (1) will have a share or interest in the pearls obtained by such ship; or (2) will have a share or interest in pearlshell obtained by such ship, other than the divers' ordinary and usual pay; or (3) is to pay or be charged with any part of the working expenses of such ship; or (4) has, or is to have, any lease, directly or indirectly, of such ship.

These directions shall not prevent the renewal of any license so long as the licensing officer is satisfied that no person of Asiatic or African race, other than the licensee, has any share or interest.

CHINESE IMPERIAL TELEGRAPHS

In view of the present tendency of the Chinese to assume the management and control of the railroads and other important business enterprises, a résumé of the annual report of the Imperial Telegraph Administration, prepared by Mr. F. D. Cloud, student interpreter at the Shanghai consulate-general, contains some interesting items:

Originally this system of telegraphs was a private concern organized by wealthy Chinese officials and gentry, but some eight or nine years ago the Central Government took over control of the company, allowing certain merchants to retain their shares, increased the capital, and secured a monopoly of the business throughout the Empire. Under Government management the system is approaching a tolerable degree of completeness and usefulness. Of late years, also, it has been paying fairly good dividends, amounting to 10 per cent in 1906, and this, too, in the face of rather large extensions of the system.

The total receipts of the system for the year were $1,597,176 United States gold, made up of the following items: From commercial business, $879,994; official business, $98,058; from general business, $619,124. The total expenditures for the same period were $951,639, as follows: For the maintenance of the superintendent-general's office, $34,252; maintenance of general office, $37,198; running expenses of the various stations, $429,888; expense in connection with official business, $20,910; all other expenses, $429,391.

According to the showing the gross profits for the year were $645,537, and that, too, from a working capital of $1,232,000. And after paying the Government royalty of $129,807 the administration was still able to pay the private shareholders a dividend of 10 per cent; all of which goes to show that the telegraph, like the railways, has come to be regarded by the Chinese as a public necessity, and likewise the telegraph, like the railway, has a great future in China.

The telephone also, while still in an undeveloped state, is destined to play an important part in the development of the new China. Wherever the telephone has been used by the Chinese it has made a lasting place for itself, and at the present writing there are many systems in various parts of the Empire being talked of and organized, many of which are certain to be installed, and since the Chinese do not manufacture telephonic or telegraphic supplies there should, in the near future, be an extensive market in China for this line of goods.

SPINNING INDUSTRY IN NIPPON

The *Jiji* publishes a report on the spinning industry of Japan prepared by Messrs. Tata & Co. of Osaka which pronounces it to be in a most flourishing condition. According to this statement the total number of the existing spinning companies is 43, which are all working, and the monthly output of yarn is about 80,000 bales, the consumption of raw cotton being 37,500,000 pounds on an average, consisting of 16,500,000 pounds of Indian, 10,000,000 pounds of American, 9,500,000 pounds of Chinese, and 1,500,000 pounds of other qualities. Almost 80 per cent of the spinning companies are contracted to deliver the whole production of yarn during this year, and about one-fifth of the producting in January, February and March next is also contracted for. Not a small quantity of the production in May and June next is also contracted for. The monthly output of cotton calico is 11,500 yards, the yarn required amounting to 3,500,000 pounds. The whole production of this year is contracted for, and one-third of the production for the first half of next year.

AMERICA'S FAR EASTERN POLICY ANNOUNCED

The visit of the Honorable Secretary of War, William H. Taft, to the Orient marks a new epoch in the policy of the United States towards its Far Eastern problems. All Americans, who cherish the good name and prestige of their country, must feel a keen sense of appreciation and pride in the utterances of Mr. Taft in his speeches at Tokio, at Shanghai, and again at Manila, in which he has pointed out clearly where the American government stands and its attitude in regard to the national interests in the Orient.

The FAR EASTERN REVIEW takes great pleasure in reproducing these speeches in full, together with the speech of Mr. Thomas F. Millard on America's Opportunity in the Orient delivered at the American Association banquet at Shanghai.

SECRETARY TAFT'S SHANGHAI SPEECH

MR. CHAIRMAN AND GENTLEMEN:

For the courtesy and hospitality evidenced by this beautiful banquet, I wish to express to you my grateful acknowledgment. It is a great opportunity and pleasure to meet the prominent citizens and residents of this great city. Shanghai is the business center and in some respects the political center of the Empire of China.

ONLY AN AMERICAN CITIZEN WITH NO OFFICIAL AUTHORITY

On my way to the Philippines as a representative of the President of the United States to signify the importance which he attaches to another step in the extension of popular self government in those Islands, I am here only by the way as a traveler, accredited with no official authority or duty or message in respect to China. What I am about to say in respect to China, therefore, is said as an American citizen and not as a representative of the American Government.

SALE OF THE PHILIPPINES

One word in respect to the Philippines before I come to America's relation to China. Americans interested in Oriental and Chinese trade naturally look to the Philippine policy of the government as having a bearing upon the attitude of America toward the Oriental in general. Reports have been circulated with an appearance of authority throughout this part of the world that the United States intends to sell the Philippines to Japan or some other country. Upon that point, I do not hesitate to express a decided opinion. The Philippines came to the United States by chance, but that government assumed a duty with respect to them and entered into an implied obligation affecting them, with the people of the Philippines, of which it would be the grossest violation to sell the Islands to any other power. The only alternatives which the United States can in honor pursue with respect to the Philippines are either permanently to retain them, maintaining therein a stable government in which the rights of the humblest citizen shall be preserved, or after having fitted the people for self government, to turn the Islands over to them for the continuance by them of a government of the same character. It is enough to say here that there is not the slightest danger of a sudden cessation of the present relation of the United States to the Philippines, such as would be involved in a sale of those Islands, and that for our present purpose the attitude of the United States toward China must be regarded not alone as a country interested in the trade of China, but also as a power owning territory in China's immediate neighborhood.

THE POLICY OF THE OPEN DOOR

The policy of the government of the United States has been authoritatively stated to be that of seeking the permanent safety and peace of Chinese, the preservation of China territorial and administrative entity, the protection of all rights guaranteed by her to friendly powers by treaty and international law, and, as a safeguard for the world, the principle of equal and impartial trade with all parts of the Chinese Empire. This was the policy which John Hay made famous as that of the "open door." By written memorandum, all the great powers interested in the trade of China have subscribed to its wisdom and declared their adherence to it. The government of the United States has not deviated in the slightest way from its attitude in this regard since the policy was announced in 1900.

THE HON. WILLIAM H. TAFT, SECRETARY OF WAR, ON BOARD THE MINNESOTA

EXTENT OF AMERICAN CHINESE TRADE, AMERICAN POLICY

I am advised by Mr. Millard, who has written much and well on the Far East and has given close attention to the statistics of the trade between China and the various countries of the world that the trade, both export and import, between China and the United States is second only to that of Great Britain. He says there is much difficulty in fixing the exact amount of trade because of the long established custom of treating every piece of merchandise that comes from Hongkong as an importation from British territory. It is certain, therefore, that the American Chinese trade is sufficiently great to require the government of the United States to take every legitimate means to protect it against diminution or injury by the political preference of any of its competitors. It can not of course complain of loss of trade effected by the use of greater enterprise, greater ingenuity, greater attention to the demands of the Chinese market and greater business acumen by its competitors; but it would have the right to protest against exclusion from Chinese trade by a departure from the policy of the open door. The acquiescence in this policy by all interested nations was so unhesitating and emphatic that it is hardly worth while to speculate as to the probable attitude of the United States were its merchants' interests injured by a violation of it. How far the United States would go in the protection of its Chinese trade no one of course could say. This much is clear, however, that the merchants of the United States are being roused to the importance of their Chinese export trade, that they would view political obstacles to its expansion with deep concern, and that this feeling of theirs would be likely to find expression in the attitude of the American government. Domestic business in the United States has expanded so enormously and has resulted in such great profits as to prevent American business men from giving to the foreign trade that attention which it deserves and which they certainly would give, but for more profitable business at home. As the population of the United States increases, as its territory fills and its vast manufacturing and agricultural interests become greater, its interest in foreign trade is certain to increase. The manufacturers now take little care to pack their goods or to give them the sizes as desired by Chinese purchasers, but this stiff necked lack of business sense is disappearing. We shall soon find the same zeal and the same intense interest on their part to induce purchasers in foreign markets that now characterize the manufacturers of other nations whose home business is not so absorbing as is that of the manufacturers of the United States. While we have been slow in rousing ourselves to the importance of a trade which has grown without government encouragement and almost without business effort to its present important proportion, I feel sure that in the future there will be no reason to complain of seeming government indifference to it.

AMERICAN ATTITUDE TOWARD CHINESE DEVELOPMENT

The United States and others who favor the open door policy sincerely will, if they are wise, not only welcome, but will encourage this great Chinese Empire to take long steps in administrative and governmental reform, and in the development of her natural resources and the improvement of the welfare of her people. In this way she will add great strength to her position as a self respecting government, may resist all possible foreign aggression seeking undue, exclusive or proprietary privileges in her territory, and without foreign aid, and enforce an open door policy of equal opportunity to all. I am not one of those who view with alarm the effect of the growth of China with her teeming millions into a great industrial empire. I believe that this instead of injuring foreign trade with China would greatly increase it, and while it might change its character in some respects, it would not diminish its profit. A trade which depends for its profit on the backwardness of a people in developing their own resources and upon their inability to value at the proper relative prices that which they have to sell and that which they have to buy is not one which can be counted upon as stable or permanent.

MONETARY REFORM

I may stop a moment in this connection to say that the Monetary Commission, headed by Professor Jenks, which was sent at the expense of the United States to China to induce China to adopt a gold standard sought to effect a reform that would have inured greatly to the benefit of the Chinese people. The example of Japan and the Philippines justifies this statement. While the recent rise in the price of silver has mitigated somewhat the evils of the two standards, the elimination from business of the gambling element involved in the fluctuations of exchange due to the difference between the gold and the silver standard would be ultimately of great benefit to the merchants and the common people of China, and to the stability and fairness of oriental business. I am sincerely hopeful that it will not be many years before such a reform is brought about.

WHAT CHINA FOR CHINESE MEANS

For the reasons I have given, it does not seem to me that the cry of "China for the Chinese" should frighten anyone. All that is meant by that is that China should devote her energies to the development of her immense resources, to the elevation of her industrious people and to the enlargement of her trade and to the administrative reform of the Empire as a great national government. Changes of this kind would only increase our trade with her. Our greatest export trade is with the countries most advanced in business methods and in the development of their particular resources. In the Philippines, we have learned that the policy which is best for the Filipinos is best in the long run for the countries who would do business with the Islands.

PROSPECTIVE REFORMS IN CHINA

It is a pleasure to know that the education of Chinese in America has had much to do with the present steps toward reform begun by the Government in China. It is not to be expected that these reforms shall be radical or sudden. It would be unwise if they were so. A nation of the conservative traditions of China must accept changes gradually, but it is a pleasure to know and to say that in every improvement which she aims at, she has the deep sympathy of America, and that there never can be any jealousy or fear on the part of the United States due to China's industrial or political development, provided always that it is directed along the lines of peaceful prosperity and the maintenance of law and order and the rights of the individual, foreign or alien. She has no territory we long for, and can have no prosperity which we would grudge her and no political power and independence as an empire justly exercised, which we would resent. With her enormous resources and with her industrious people the possibilities of her future cannot be overstated.

IMPROVEMENT IN RELATIONS BETWEEN AMERICA AND CHINA

It is pleasant to note a great improvement in the last two years in the relations between the United States and China. In the first place through the earnest efforts of President Roosevelt, the administration of the Chinese immigration laws of the United States has been made much more considerable. The inquisitorial harshness to which classes properly admissible to the United States under treaty between the two countries were at one time subjected, has been entirely mitigated without in any way impairing the effectiveness of the law. The boycott which was organized ostensibly on the ground of such harshness of administration proved in the end to be a double edged knife which injured Chinamen even more than Americans and other foreign countries quite as much. Happily that has now become a closed incident, a past episode.

Again the United States has exhibited its wish to do full justice to China by a return or waiver of the indemnity awarded to it for injuries and expenses growing out of the Boxer trouble. It has been said that we have done only what we ought to do. This may be so, but a nice sense of international obligation is not so universal that it may not justly increase the friendly feeling between the parties to the transaction.

With the full approval of President Roosevelt Mr. Root secured the legislation needed to improve our Consular service and to place it on a merit basis. I do not think it too much to say that the consular representatives in China within the last decade have not been up to the standard which the importance of the business interests of the United States in China demanded. Aware of this, the administration at Washington has within the last three years given especial attention to the selection of Consuls in China. This was made evident in the selection of both Mr. Rodgers and Mr. Denby as Consul General at Shanghai. It is a new sensation for an American to come to a Chinese city and find as its consular representative one who knows the Chinese language and who understands the Chinese Empire as few Chinamen understand it. I congratulate you citizens of the United States on having such a representative of your interests in this great commercial community as Mr. Denby.

UNITED STATES COURT FOR CHINA

Finally another great step has been taken by the government of the United States to improve its relations to China. Many years ago, the Chinese Empire granted the right to citizens of the United States to reside in so-called concessions within the borders of the Chinese Empire, and there enjoy the security of living under the government and administration of law by officers of the United States. This extra-territoriality was chiefly important in securing an administration of justice in accordance with the principles and laws obtaining in the United States. It imposed an imperative obligation upon the United States to see to it that the justice thus administered by the officers whom it vested with judicial powers should be of the highest and most elevating character. I regret to say that this obligation for many years did not receive the attention and care that it ought to have had; but in the last Congress, at the instance of Secretary Root, under the guidance of Mr. Denby, then the Chief Clerk of the State Department and now your Consul General at Shanghai, with the able assistance of Mr. Denby's brother, a Member of Congress from Michigan, and of Senator Spooner of Wisconsin, a law was passed which properly recognizes the dignity and importance of the power conferred by the Chinese treaty upon the government of the United States to administer justice in respect of citizens of the United States commorant in China by creation of a United States Circuit Court for China. Our government was fortunate in the selection as the first judge of that court of a gentleman who had had four years experience in the orient as Attorney General of the Philippines, and who came to Shanghai with an intimate knowledge of the method of uniting in one administration, the principles of the common law of the United States with the traditions and conditions of a foreign country. His policy in raising high the standard of admission to the bar and in promoting vigorous prosecutions of American violators of law and the consequent elimination from this community of undesirable characters who have brought disgrace upon the name of American in the cities of China, cannot but commend itself to everyone interested in the good name of the United States among the Chinese people and with our brethren of other countries who live in China. It involves no small amount of courage and a great deal of common sense to deal with evils of this character and to rid the community of them. Interests which have fattened on abuses cannot be readily disturbed without making a fight for their lives, and one who undertakes the work of cleansing and purifying must expect to meet resistance in libel and slander and the stirring up of official opposition based on misinformation and evil report. I am glad to think that the Circuit Court for China has passed through its trial and that the satisfaction which its policy has brought to the American and foreign communities in China and to the Chinese people will not be unknown to the Administration at Washington, at whose instance this court was first established.

ADDITIONAL LEGISLATION NEEDED

I have just read Judge Wilfley's opinions both in civil and in criminal matters. He has worked hard and well. He has made it plain that some additional legislation by Congress is necessary to lay down a few more general principles of law which are to govern in the extraterritorial jurisdiction of the Court in China. I sincerely hope and believe that the establishment of this court will make much for the carrying out of exact justice in the controversies that arise in the business between Chinamen and Americans. There is nothing for which the Oriental has a higher admiration than for exact justice, possibly because he is familiar with the enormous difficulty there is in attaining such an ideal. If this court shall lead the Chinese to believe, as it ought to do, and will do, that the rights of a Chinese are exactly as secure when considered by this tribunal as the rights of an American, and that there is no looking down upon a Chinese because he is a Chinese, and no disregard of his business rights because he is an oriental, it will make greatly for the better relations between the two countries.

SUITABLE UNITED STATES GOVERNMENT BUILDING NEEDED IN SHANGHAI

And now what else is needed? It goes without saying. What you need is a great government building here to be built by the expenditure of a very large sum of money so that your court and your consulate shall be housed in a dignified manner. Our government should give this substantial evidence of its appreciation of the importance of its business and political relation to the great Chinese Empire. In the Orient, more than anywhere else in the world, the effect upon the eye is important, and it must be very difficult for Chinamen to suppose that the government of the United States attributes proper importance to its trade with China when it houses its consulate and its judges in such miserably poor and insufficient quarters as they now occupy. All over the United States, Congress has provided most magnificent court rooms for the administration of Federal justice. Will it, now that it has created a court whose jurisdiction is coextensive with the Chinese Empire, be less generous in the erection of a building which shall typify its estimate of the importance of its relation to Chinese trade and the Chinese people?

SECRETARY TAFT'S TOKIO SPEECH

Baron Shibusawa, Mr. Mayor and Gentlemen of the Municipality and Chamber of Commerce and Other Distinguished Citizens of Tokio:

I beg to extend to you my heartfelt thanks and acknowledgement for this magnificent evidence of your hospitality and good will. It is a little more than two years ago since a large party of whom I was one, was the recipient of a similar courtesy and attention in this very hotel at the hands of the then Prime Minister Count Katsura. So many were we then that I ventured to compare our coming to the descent of a cloud of locusts upon this devoted land. But you stood the onslaught nobly and your treatment of us is a bright memory never to be effaced.

At that time you were engaged in a titanic struggle with another great nation but the first traces of the down of peace were appearing in the east. We Americans shall always feel proud of the part that Theodore Roosevelt, with the prestige of the headship of our people, was able to play in hastening the end of the war. Peace has come under circumstances honorable to both parties and Japan having proved her greatness in war as in peace has taken her stand in the first rank of the family of Nations. You have concluded new treaties with your former antagonist of amity and commerce and the wounds of war are healed.

The growth of Japan from a hermit country to her present position in the last fifty years is the marvel of the world. In every step of that development, even at the very beginning we Americans are proud to record the fact that Japan has always had the cordial sympathy and at times the effective aid of the United States. The names of Commodore Perry, of Townsend, Harris, of John A. Bingham, of General Grant and of Theodore Roosevelt will be inseparably connected with the history of the advance of Japan to the front rank among the world powers.

But now for a moment, and a moment only, a little cloud has come over the sunshine of a fast friendship of fifty years. A slight shock has been felt in the structure of amity and good will that has withstood the test of half a century. How has it come about? Well in the first place it took a tremendous manifestation of nature to bring it about. Only the greatest earthquake of the century could have caused even the slightest tremor between such friends. I do not intend to consider the details of the events in San Francisco. I cannot trespass on the jurisdiction of the Department of State, of my colleague Mr. Root, or my friend Mr. O'Brien, to discuss them. But this I can say that there is nothing in these events of injustice that cannot be honorably and fully arranged by ordinary diplomatic methods between the two governments conducted as they both are by statesmen of honor, sanity and justice, and representing as they do two peoples bound together by half a century of warm friendship.

It is said that there is one word that is never allowed to creep into the diplomatic correspondence between nations, however hostile, and that word is "war." But I am not a diplomat and am not bound by diplomatic usage. I can talk of war. I am not one of those who hold that war is so frightful that nothing justifies a resort to it. We have not yet reached the millenium and there are international grievances that can be redressed and just international purposes that can be accomplished in no other way. But, as one of our great generals has said, "War is hell" and nothing but a great and unavoidable cause can justify it.

War between Japan and the United States would be a crime against modern civilization. It would be as wicked as it would be insane. Neither the people of Japan nor the people of the United States desire war. The governments of the two countries would strain every point to avoid such an awful catastrophe.

What has Japan to gain by it? What has the United States to gain by it? Japan has reached a point in her history when she is looking forward with confident hope to great commercial conquests. She is shaking off the effects of war and is straining every nerve for victories of peace. With the marvellous industry, intelligence and courage of her people there is nothing in trade, commerce and popular contentment and enlightenment to which she may not attain. Why should she wish a war that would stop all this? She has undertaken with a legitimate intent in so close a neighbor to reform and rejuvenate an ancient kingdom that has been governed or mis-governed by fifteenth century methods. His Majesty, the Emperor, has shown his appreciation of the difficulty of the task by sending to Korea Japan's greatest statesman who has exhibited his patriotism by accepting the heavy burden when by his years and his arduous labors for his country in the past he has earned a right to rest. No matter what reports may come, no matter what criticism may be uttered, the world will have confidence that Prince Ito and the Japanese Government are pursuing a policy in Korea that will make for justice and civilization and the welfare of a backward people. We are living in an age when the intervention of a stronger nation in the affairs of a people unable to maintain a government of law and order to assist the latter to better government becomes a national duty and works for the progress of the world. Why should Japan wish a war that must stop or seriously delay the execution of her plans of reform in Korea? Why should the United States wish war? War would change her in a year or more into a military nation and her great resources would be wasted in a vast equipment that would serve no good purpose but to tempt her into warlike policies. In the last decade she has shown a material progress greater than the world has ever before seen. Today she is struggling with the abuses which accompany such material development and is engaged in an effort by process of law to retain the good for her people and to suppress the evil. Why should she risk war in which all the evils of society flourish and all the vultures fatten? She is engaged in establishing a government of law and order and prosperity in the Philippine Islands and in fitting the people of those Islands by general education and by actual practice in partial self government to govern themselves. It is a task full of difficulty and one which many Americans would be glad to be rid of. It has been suggested that we might relieve ourselves of this burden by a sale of the Islands to Japan or some other country. The suggestion is absurd. Japan does not wish the Philippines. She has problems of a similar nature nearer home. But, more than this, the United States could not sell the Islands to another power without the grossest violation of its obligation to the Philippine people. It must maintain a government of law and order and the protection of life, liberty and property itself or fit the people of the Islands to do so and turn the government over to them. No other course in honor is open to it.

Under all these circumstances then, could anything be more wicked and more infamous than the suggestion of war between nations who have enjoyed such a time honored friendship and who have nothing to fight for. "If this be true," some one asks, "why such reports and rumors of war?" The capacity of certain members of the modern press by headlines and sensational dispatches to give rise to unfounded reports has grown with the improvement in communication between distant parts of the world. The desire to sell their papers, the desire for political reasons to embarrass an existing government and their even less justifiable motives have led to misstatements, misconstructions, unfounded guesses all worked into terrifying headlines that have no foundation whatever. In each country, doubtless there are irresponsible persons that war would aid or make prominent who try to give seriousness to such a discussion, but when one considers the real feelings of the two peoples as a whole, when one considers the situation from the standpoint of sanity and real patriotism in each country, it is difficult to characterize in polite or moderate language the conduct of those who are attempting to promote misunderstanding and ill-feeling between the two countries.

It gives me pleasure to assure the people of Japan that the good will of the American people toward Japan is as warm and cordial as ever it was and the suggestion of a breach of the amicable relations between them finds no confirmation in the public opinion of the United States. It is exceedingly gratifying for me to have as my companion in my visit to these shores, Mr. O'Brien, the new Ambassador to Japan from the United States. We have been friends for years. I am sure you will find in Mr. O'Brien all that could be desired in one whose chief official duty it will be to preserve the friendship between our two countries.

I have already referred to the enthusiastic welcome which was accorded our party of American Congressmen two years ago by the people of Japan. So great was the kindness of his Majesty the Emperor and the officers of the Government that we were overcome with our welcome. Coming now to this country for the fourth time, I am an old story and am not entitled to any other welcome than that to be accorded an old friend who comes often. The distinction of being the Emperor's guest another time, I do not deserve and should feel it my duty to decline, enjoyable as the honor is, but for the fact that I know that his Imperial Majesty graciously adopts this course not as a personal matter but to signify to the American people and government the continuance of his friendship for the United States. It gives me the greatest pleasure and is a great honor for me to be able to bring a reciprocal message of good will from our President and our people.

THOMAS F. MILLARD'S SPEECH

Mr. Millard's speech on America's Opportunity in the Far East follows:

AMERICA'S OPPORTUNITY IN THE EAST.

Mr. Chairman and Gentlemen:

I first saw the East eight years ago, when events following upon the acquisition of the Philippine Islands by the United States of America attracted notice in our country and throughout the world. I am able to recall but little that is definite of my early impressions of the Orient. My first visit was very brief, and I carried back home little more than a vivid mental picture of an old and complex civilization, which as yet presented itself to me almost entirely through its visual aspects, a somewhat mystifying jumble of queer costumes, queerer manners and habits. It was not until my second visit, in the following year, that a realization of what the East is began to formulate in my mind. Subsequent visits followed, at comparatively brief intervals, until I am now making my sixth trip to this part of the world. Gradually the East has to me assumed a different aspect. The incidents of social life, the manners and customs which at first were so strange and interesting, almost to the exclusion of other impressions, have fallen into their correct perspective in comparison with more vital elements, and in their stead have appeared those forces of civilization which in all communities determine the conditions of human existence and the political destiny of nations; the resources of the land, and the activities which propel or retard, as the case may be, the progress of material development. The propositions involved in these conditions are the most interesting I have ever had contact with, and I have come to hold the opinion that the problem of the future of the East is, in its broader application, perhaps the greatest question in respect to its influence upon the fate of nations and the ultimate destiny of the human race with which international statesmanship is now confronted.

It seems inevitable that any patriotic American whose attention is intelligently directed to the subject should begin to consider the position of the United States in respect to the solution of this problem. It is evident that our nation must be materially affected by the course of events, whatever it may be. Our position bordering on the Pacific Ocean makes our national domain actually contiguous, in a modern sense, to the countries which touch the Pacific on its western shores. We have possessions lying within the locality which must be the scene of the forthcoming evolution and where some of its results will be directly expressed. And we have a hopeful interest, through commerce, in the enormous, the almost incalculable material development which the application of modern western influence and methods to the teeming resources of China is sure to bring about. It is difficult, in any candid examination of the present situation in the East and the probabilities which lie before this locality, to escape the conclusion that the interest of the United States in them is fundamental, in so far as this expression may be applied to regions where our nation does not now exercise or expect to acquire political authority.

If I seem to dwell especially upon my own impressions of the East, it is because I believe that my own mental process in approaching these great questions is analogous to what will be, I may say to what already is, that of a considerable part of the American people. I am absolutely certain that interest and curiosity in the possibilities of the East, and particularly those of China, are rapidly growing in America, and have even now assumed important dimensions. I am able to note this not only through the publicity given in our country to events and conditions in the East, but also in my personal intercourse with people in various walks of life, and through communications which I frequently receive. Within the last few months I have received, I think, as many as fifty letters from persons in the United States inquiring about the prospects for young Americans and for American investments in China. That a person like myself, in no official or business way identified with the East, should receive so many inquiries certainly indicates that a keen interest in China is becoming widespread among Americans, and that the American people are receptive to information which tends to throw light upon conditions here. An interesting and significant intimation arising from my personal contact with people at home, and discussion with them of the Far Eastern situation, is the change in the general character of the inquiries they ply to one. Formerly people were curious about the details of Oriental life; manners, customs, clothing and what not. It is seldom, nowadays, that I am asked such questions; indeed, I am but poorly equipped to answer them, for these are not the Oriental phases which have most interested me, and I know comparatively little about them. What Americans seem to want to know today is something about the commercial and industrial possibilities of the East, and the political conditions upon which these must, in some measure, eventually turn. They are particularly interested in the future of China, which many already recognize as the key to the new Orient whose coming even limited vision may now clearly foresee. To such inquiries it has been a great gratification to me to feel able to speak encouragingly about the future of this great Empire, and the integrity and stability of its people; and enthusiastically of the prospects which, with equal opportunity, await American enterprise here. I find among intelligent Americans a growing appreciation of our position in the East, of the interests, both actual and prospective, which we are called upon to promote and protect here, and a disposition to insist that these interests *be* promoted and protected by our Government. There is, also, a fairly intelligent comprehension of the problem with which China is confronted, and a sympathy with her difficulties. There is growing realization that the United States should be directly concerned about the amelioration of these difficulties, and the stable establishment of the Empire upon a more modern basis. I find also that this concern is founded not upon an evanescent sentiment, but upon appreciation of a genuine and lasting community of interests—a community of interests which, in my opinion, has no proportionate parallel with the relations of our nation and any other Oriental state.

It is true that much of this sentiment among Americans at home is as yet somewhat nebulous, and hardly formulated into a conviction which will immediately lead to extensive national activity in the East. But I am glad of this opportunity to assure Americans whose lot is cast here that *this unity of opinion cannot* now be far distant. The most casual observer of the never-ending evolution of public opinion in the United States must have noticed a growing demand for the development in the administration of our Government of what, for want of a better term, I may call a National Statesmanship in our foreign relations. By this I mean a statesmanship which shall be above the petty manipulations of party politics, and which shall direct the broader interests of the nation along the lines of a definite and, if possible, a far-seeing policy. There exists in America, as in all countries, a class of persons who regard all seeming innovations with uneasiness, and which operates as a check upon a too sudden departure from old conceptions and forms. This element has consistently opposed, at the time when they were first proposed, all additions to the national domain, and all extensions of our national activities which might upon occasion call for direct intervention of the Government. None of the forebodings which invariably attended each step in our national growth have so far been justified by the course of events. To those of you who, noting the opposition of some of our public men to any active extension of our national opportunities in this part of the world, fear that America will permanently decline these opportunities and suffer them to lapse for want of proper support and encouragement, I may express my opinion that this will not be the case. I believe that the men of my generation will adopt the broader view, and I may further point out that the men of my generation will soon direct our national affairs; in fact, they already exercise a strong influence. There is nothing in the history of the American people, or their present status and conditions, which warrants the assumption that the generations now approaching maturity and those which are to come will fail to display the same courage and capability in meeting the questions which will confront them, the same foresight and disposition to rise to opportunity that characterized our predecessors.

THOMAS F. MILLARD.

That our nation has reached another turning point in its development is generally recognized. The Spanish-American war and the unexpected acquisition of new territories which was among its results brought new problems and responsibilities. But while these causes gave, for the moment, new interests and outlets, the greater and determining impulse toward wider fields must be sought deeper among the well springs of our national energy. It lies, in my opinion, in our economic situation. We have reached a crisis of our industrial development. I do not mean that we no longer have room to grow within. The resources of our own country are as yet only partially developed, and for many years to come the greater part of our energies will continue to be expended upon them. But in the equation between our swelling industrial output and our home consumption, enormous as this latter factor now is, we have come to a point when we must seek an outlet in new markets or soon see our industrial condition arrive at a state of arrested progress. Since such a condition must re-act upon our prosperity at home, and affect the future of our nation in comparison with the other great nations of the world, it is clearly the province of our statesmanship to look beyond the needs of the moment and find new markets for our products, and to devise ways and means to secure for them equitable entrance to those markets.

This is one of the problems which confronts the new National Statesmanship which America must and *will* have; and in scanning the world for the commercial opportunity necessary to its fruition, the eyes of our statesmen cannot fail to turn to the East. There are no longer any geographical mysteries in the world, in the sense of undiscovered lands suitable for the profitable application of human activity The sphere which we inhabit is defined so far as terrestrial limitations are concerned; and if we have not yet fathomed its economic possibilities it is because nature always holds some secret in reserve to be revealed only at the imperative need and demand of mankind. Here in China alone are more than four hundred millions of intelligent and industrious people, living in the temperate zone, and inhabiting a land which is a natural Empire. Here, too, is a great nation arrived at a turning point. There is something more than accident in this coincidence. Am I going too far to declare that China and America need each other; that in some important matters their futures are inseparably linked? I think not. Can anyone conceive that this broader statesmanship which we must have, which we *will* have, will fail to rise to the possibilities which are involved in the relations between the United States and China? It is not always possible for a Government by its separate action to create trade where none has before existed, although history affords many examples of such accomplishment; but it can always pave the way for trade. I believe that it is the duty of a Government to do this. The time has arrived in our national history when our statesmanship must climb a lofty intellectual mountain, survey the world, and plan for the glorious future which all Americans believe stretches ahead of our country. It is not possible that such a survey can fail to include the Orient, where two-thirds of the inhabitants of the earth, just waking to new conditions and opportunities, are congregated.

This new American statesmanship will find plenty to do in China today. Owing to extraordinary conditions attending foreign residence and business throughout the Empire, we should send to our consular service here only the best men who can be induced to enter it. The late John Hay once remarked that the position of United States Consul-General at Shanghai is the most important post in our consular service. There is no doubt that this comparison is substantially true, and in proportion to the importance of the ports where they are located this is also true of our other consulates in China. In no other part of the world do our consuls have to perform such complex, varied and important duties, and only a high degree of intelligence and integrity should be summoned to the work. It is a cause for congratulation to note the great improvement in this respect in recent years.

In the field of diplomacy there is no less important work to be done. Modern conditions are slowly encroaching upon the traditional functions of diplomacy, and may in time completely alter its duties and procedure, but it is still a convenient method of communication between governments, and offers opportunity for tact and talent. I unhesitatingly express the opinion that in the whole world there is not now a diplomatic post so important to the United States as our legation at Peking It is one of the few posts where there is still play for *constructive* diplomacy, and our Government should not neglect the chance afforded to not only advance our legitimate interests in China, but also to extend advice and aid toward the rehabilitation of the Empire. This is not a period for indifference or hesitation, but the hour when a friendly hand may properly be extended as support and guidance upon a difficult path.

A problem of purely practical character which invites the immediate action of the United States is to prepare a solid foundation for commercial intercourse and American enterprise by establishing upon a firmer basis the legal status of American residents in China and of American interests here. Happily, an important step in this direction has already been made, through the creation of a United States Court presided over by a judge of high attainments and integrity. It will be necessary, however, for Congress to extend the value of this court to the community and to American commercial interests in China by amplifying and more clearly defining its powers, and by providing it with suitable quarters for the performance of its functions. Established now less than a year, this court has already performed an important and necessary work by contributing its influence toward the establishment of American social and business standards in China on the same plane they occupy at home. It has made a promising beginning in the long neglected work of clarifying our status under the law of extra-territoriality, so that the uncertainty and confusion formerly so detrimental to satisfactory intercourse with native and other foreign residents of the country may be eliminated. The progress of this court is highly appreciated at home, especially by the business element of the country, which fully recognizes that there is no secure highway for commerce except along the path of law and equity. As long as extra-territoriality obtains in China, it is the plain duty of our Government to labor for a better order of things, and to remove as far as is possible all causes for friction. I think that a commercial bureau, whose exclusive function will be to promote trade between America and China, and to act coordinately with our consular service, should also be established here, and provided with the personnel and equipment necessary to pursue this important work.

The present and future invites Americans to look farther afield, beyond our national boundaries if need be, for whatever of material prosperity and benefit our energy and intelligence can accrue to ourselves and to our country. Nor does this disposition imply peril or disadvantage to other nations and peoples. On the contrary, American activity, enterprise, and influence, where it is representative of our institutions, is, when applied to Oriental nations, likely to be at least as beneficial to the governments and natives of these countries, and to all persons residing here, as similar activities of other nations. While we pretend no altruistic motive in extending our national interests in the East, beyond the fact that they are pressed in a spirit of friendly reciprocity, we believe that the East will benefit as much by extensive relations with us as we will through relations with it.

Let none from premature judgment concerning American policy toward the East because in the immediate past it may have seemed, on the surface, to be hesitating and uncertain. This is the evidence of caution, not of timidity; of a wish to well consider the object sought and the way to properly attain it, not a fear of any passing consequences which may attend. If at this moment I have any deep conviction, it is that the American people will insist upon taking a proportionate part in the development of China, extending such encouragement and aid as may be fitting and acceptable, and what the American people insist upon, the Government of the United States will be compelled to undertake. The seeds of this insistence have already been sown. And in pursuing an American policy in this part of the world America will not be bound by effete traditions, by doubts and fears accumulated through centuries of narrow views and prejudices, but will take hold of the situation as it presents itself today, and as it premises for the future. She will not ignore the experiences of our western predecessors and associates in this field, but will bring to the task her own conception of the problem and her own methods for solving it. I believe that many here present will live to see some portion of a harvest which will be reciprocal, we hope and trust, to Orientals as well as ourselves, reaped and garnered.

THE KAMPAR ELECTRIC INSTALLATION

The opening ceremony of the electric installation belonging to the Société des Etains de Kinta at Kampar was performed on Saturday by His Highness to Sultan of Perak, in the presence of Mr. Birch, Resident of Perak, and a numerous gathering of the Kinta officials and special guests, says the *Times of Malaya*.

At 5.45 p. m. His Highness arrived at the Power House and was escorted into the house by M. Legros—the manager of the company's mines—and the staff, followed by the guests. His Highness having taken up a position near the main engine with Mr. Birch, M. Legros addressed the company.

After expressing his gratitude at the presence of His Highness, the Resident, and company, as well as thanking the Perak Government for having so kindly granted the company the necessary authority with regard to carrying out the work, he proceeded to read the description of the installation. A reservoir having a capacity of 40,000 cubic feet—constructed at the water head of a water-fall artificially created by the diverting of the Rawang river at a point situated 1830 feet above the level of the engine house—is connected to the house by a line of pipes 6,500 feet in length, the diameter gradually decreasing from 80 inches at the middle to 12 inches in the lower part. It is made with mild steel plates rivetted and flanged, the thickness of the metal gradually increasing from one eighth of an inch at the upper to three eighths of an inch at the lower part. These pipes weighing one hundred and fifty tons were made at Grenoble. These pipes penetrate into the basement of the engine house, two branches going to the turbines respectively. Owing to the high pressure of the water on its arrival into the turbines, the quantity required by both engines—together supplying 500 horse power—is only twenty-six gallons per second, the water reaching the paddles of the turbines at a speed of two hundred feet per second. Only one opening of less than four square inches is sufficient to feed each turbine. The energy produced in the wheels is immediately absorbed by these alternators which supply electric triphaseous current, under a tension of six thousand volts, with fifty periods per second. This high tension order has been adopted in order to be able to transport the energy to great distances with the smallest possible loss.

This installation has been formed with the sole idea of economising the high fuel expenses of the Temoh and Kampar mines belonging to the company, as well as to supply the town with as much public and private light as possible; and with the possibility of new lands, far remote in the jungle and miles away from cartable roads being opened up through the ability of the wires to supply them with the necessary energy.

SHANGHAI PUBLIC IMPROVEMENTS

The following is an excerpt from the report of the municipal engineer at Shanghai to the council for the month of July showing the status of the public improvements there:

Works in Progress.—West Hongkew Police Station. Quarters and Godown at Gaol. New Transformer Station at Electricity Works. Police Quarters Gordon Road (Foreign Police.) Gurdwara for Sikhs. Indians' Cookhouse, Central Police Station. Foundations for boilers, machinery, etc., Electricity Works.

Garden Bridge.—Chekiang Road Bridge. Concrete Bunding Soochow Creek. Repairs to North Szechuen Road Bridge. Erection of steamroller shed Yunnan Road. Hardwood bunding Hongkew Creek between Range Road and Thorne Road. Hardwood bunding Yangtszepoo Creek, south of Yangtszepoo Road. Bricking and metalling Lay Road by convict labor. Repairing bridges Jessfield Road. Laying 3-ft. 0-in. culvert Gordon Road north of Sinza Road. Cement floor and drainage to new quarters at Gaol. Painting and varnishing exterior and interior of Municipal Hospital Range Road. Annual painting of Municipal Buildings, etc., etc.

Works Finally Completed.—Re-erection of Margary Memorial in Public Garden. Repairs to North Thibet Road Bridge, Pootung Cemetery Jetty, Peking Road Pontoon and Bridge, Russo-Chinese Bank pontoon and bridge, Soochow Creek landing stages. Bund Foreshore stone slope. Bunding at Soochow Creek, Brenan Road.

Plans Completed.—Detail drawings for pylons to Garden Bridge. Working drawings Police Depot Gordon Road. Plan for timber jetty Soochow Creek opposite Santai Road.

Garden Bridge.—The abutments and pier are now complete with the exception of jointing the top string course and fixing the anchor bolts. The temporary footbridge connecting Astor Road with the Public Garden was opened to traffic on the 12th instant. The temporary bridges over the cofferdams were then removed and the works fenced off.

The representatives of the contractors for the steel work (Messrs. Howarth Erskine, Ltd.) arrived on the 25th and the necessary arrangements are being made for handling the steel immediately it arrives. A commencement has been made with the work of filling up and dismantling the north and centre cofferdams.

Chekiang Road Bridge.—The whole of the pile driving for the north abutment has been completed. The south abutment has been raised 17-ft. 0-in. that is, to within 7-ft. 0-in. of the bearing plate level.

Tramways.—The track has been laid across the new Skew Bridge culvert in Bubbling Well Road.

Police Training Depot.—This building has not yet been commenced owing to the delay in acquiring the additional land on the north of the site.

Lighting.—The lighting of a portion of Gordon and Markham Roads with incandescent gas lamps has been carried out.

Works Completed on Road Widening and Extensions.—Works have been completed on Tsepoo, Kansuh, North Szechuen Road Extension, Wonglo, North Shanse and Fearon Roads.

FORMOSA TEA REPORT

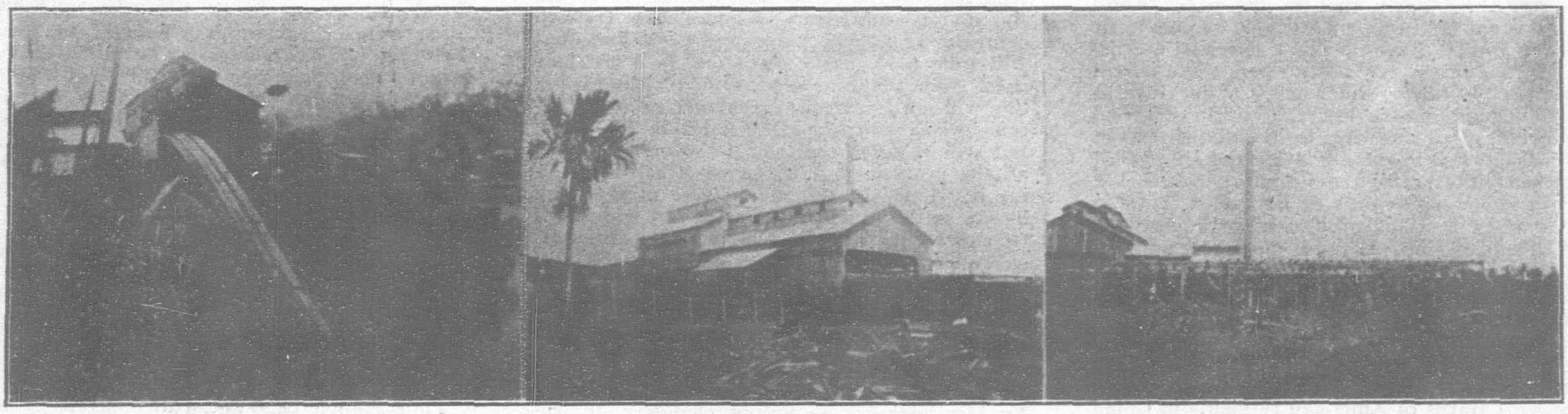
Since the first of August the weather has been fine, and the much-needed rain is now beginning to make itself felt in the lighter arrivals. Should we get no rain during the next fortnight we may look for a scarcity of low grade Oolongs, and what promised to be a bumper crop turn out little, if any, in excess of last season's figures, writes the *China Mail* correspondent.

Our exports for August are as follows:—

To U. S., via Suez, from Keelung	803,223
" " " Pacific do.	1,717,253
" London via Amoy	128,085
" U. S. do.	148,806
" Amoy	31,210
" Foochow	4,115
" America, via Japan	145,211
Total—lbs.	2,977,903

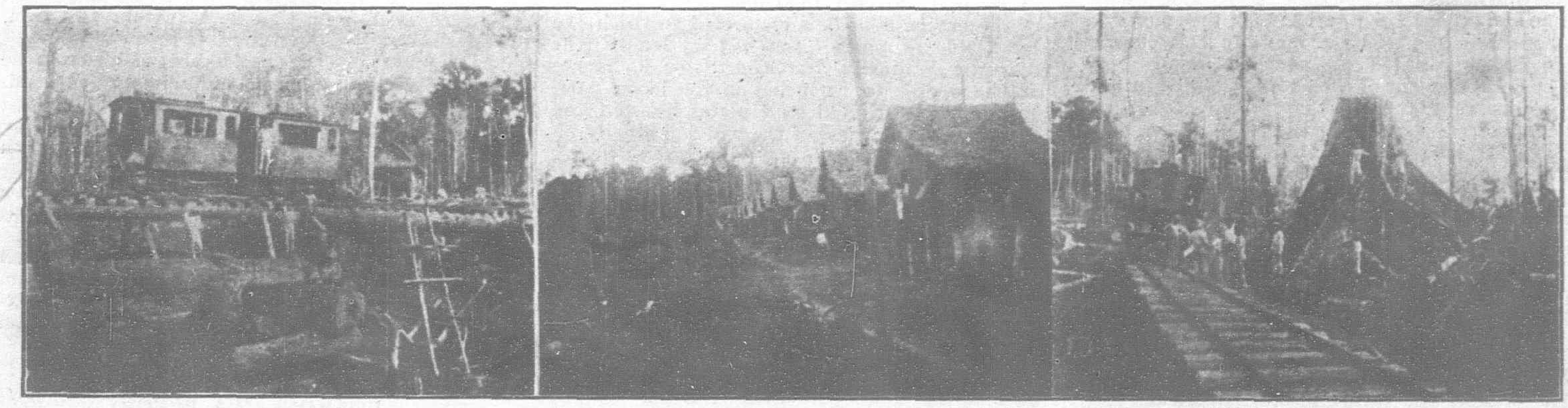
THE INSULAR LUMBER COMPANY

Among the resources of the Philippines as yet undeveloped, the rich forests take a prominent place, and from indications capital is beginning to realize the advantages offered for investment in the lumbering industry which is as yet in its infancy. Among the pioneer companies organized since American occupation that have met with success is the Insular Lumber Co. now operating with the largest plant East of Suez on the island of Negros. The company has orders that will take it several years to fill and the forest tract contains sufficient timber to supply the plant for 40 years working at its present capacity of 100,000 feet every ten hours.



THREE VIEWS OF THE INSULAR LUMBER CO.'S NEW MILL

The Insular Lumber Co. was organized in New York State with a capital stock of $1,000,000 gold, $900,000 of which has been issued. The president is Mr. W. P. Clark, of Belmont, New York, and the head of the well known firm of Messrs. Clark Bros., manufacturers of saw mill machinery, etc., of Belmont; the treasurer is Mr. Charles E. Sherman, a wealthy mining man who is interested in large properties at Nome; the secretary is Major W. P. Reid of New York, and the directors are Mr. W. P. Champney, president of the Eberhardt Manufacturing Co., Cleveland, Ohio; Mr. C. A. Nicola, of The Stone Myer Lumber Co. of Cleveland and Mr. A. Burlingame Johnson of Manila, Managing Director.



VIEWS OF THE INSULAR LUMBER CO.'S CONCESSION IN NEGROS SHOWING FOREST, RAILWAY AND COTTAGES BUILT BY THE COMPANY FOR ITS EMPLOYEES

The tract included in the company's concession is described by the forestry bureau as follows:

"The tract of the Insular Lumber Company is situated in the municipalities of Cadiz and Sagay, Province of Negros Occidental, Island of Negros, P. I., approximately in latitude 10° 50' north and longitude 123° 30' east of Greenwich. Its area is 69 square miles, or 44,160 acres (18,000 hectares), of which approximately 39,660 acres (16,060 hectares) are forested and the remaining 4,500 acres cultivated, waste land, and recent clearings. The tract lies on the lower slopes of Mount Silay, just back of the coastal strip of sugar lands, here about 6 miles wide, and consists of two adjoining parts, the upper and smaller of which lies to the south of the lower along the Himugaan River. It is a part of the large and similar forest which extends from Escalante to Silay, some 50 miles, lying 6 to 15 miles back from the coast and extending far into the interior. In some places, as on the Himugaan River, it occupies rolling and hilly lands, and in others, as near Silay, it has been driven back to the steep foothills."

In all this area there is probably about ten square miles not covered by dense forest but the balance of the tract, according to the most conservative estimate, will average at least 40,000 board feet an acre.

The first operations of any moment on this tract were inaugurated in 1903 when the Iloilo Electric Co. secured a license to cut 100,000 cubic feet of timber in the sitio of Sanghai and installed a saw-mill with a capacity of 15,000 feet b. m. a day. In 1904 the Insular Lumber Co. was incorporated under the laws of New York and took over the interests of the Iloilo Electric Co. in this tract and in addition secured the present license agreement with the Insular Government to exploit the tract now under its concession for a period of twenty years.

The new mill recently completed is situated at the mouth of the Himugaan River where the product of the mill may be transported by boat. The shallowest point in the river, which is a tide water stream, is nine feet at high tide.

The mill, complete with the latest and most modern equipment in machinery, etc., cost about ₱200,000.

It was built by Clark Brothers Co. of Belmont, N. Y., the president of which company is also president of the Insular Lumber Co. It is a nine foot band mill with 14" saws and an eight foot band re saw. It has steam feed; steam nigger, power set works, live rolls, automatic trimmers, gang edger, bark mill, automatic stokers, sorting rolls and in fact every modern labor saving device known to the trade.

The power plant consists of a 450 h. p. double cross compound Corliss engine and 550 horse power boiler capacity. A complete fire fighting system will be installed at once with standard fire plugs distributed about the yard and around the mill. An electrical plant has arrived and will be installed so as to be able to run the plant two shifts, thus doubling its capacity.

The main mill building is 42' × 240', two stories high, while the central section is three stories, the third being occupied by filing room machinery.

In addition to this equipment sorting rolls and other modern machinery have been installed which make the plant ideal.

All the logging is done by machinery, not an animal being employed in any capacity about the plant or the tract.

The logs are snaked by means of donkey engines and surface cables to the forest railway which transports them to the river bank, where they are dumped into the company's boom. The railroad is a 3' 6" gauge and extends at the present time about two miles from the river into the tract. The logs are snaked by the donkey engines and surface cables from about 1500 yards on either side of the railroad so that the area covered is large. The donkey engines are moved from place to place under their own steam.

Previous to the building of the forest railway the donkey engines and surface cables snaked logs in some instances from a distance of over one and one-half miles to the mill from the dense forest. At the present time the company has two locomotives in operation, but another has been ordered from The Lima Locomotive & Machine Co. of Lima, Ohio, which is expected to arrive this mont hand will be installed on the road immediately. It is estimated that, running the mill at its fullest capacity of two shifts a day, it will not be necessary to extend the railroad more than two miles per annum, owing to the density of the forest.

The forest consists principally of three varieties of wood, all of which have a high commercial value. The Balacbacan or Philippine mahogany is a wood that runs from 2 feet to 7 feet in diameter and stands from 100 to 125 feet in height without a limb and makes up about the greater amount of the available timber. Apitong found there has been tested by the Forestry Bureau and demonstrated the highest tensile strength of any known variety of Apitong. About 18% of the concession is covered by this wood.

In addition to these two valuable woods there is the Almon (white lauan). This wood is very strong and durable, free from knots and consequently there is less waste than in woods not so constituted.

HAULING ENGINE AT THE LANDING OF THE INSULAR LUMBER COMPANY

All these woods are in great demand and with the mill running at full capacity it is impossible to fill local orders. During the year, several sample shipments of Philippine mahogany have been made to the United States and a contract has been entered into with a large American firm to handle five million feet b. m. annually of this wood alone.

The company employs Filipino labor under American supervision. The main force operating the machinery is comprised of expert American mechanics and under their direction the Filipinos operate the auxiliary machines. All the felling, snaking and hauling of the logs to the mill is mainly accomplished by the native crews carefully supervised by American foremen.

Cross-cut saws are used in felling the trees and so expert have the Visayans become that it is very seldom that the trees cross in falling, or break. Natives cut up the trees into proper lengths and handle the cables in snaking most expertly, taking logs out of the most difficult positions most successfully and with due care being exercised to preserve the donkey engines and the cables. They are also expert at splicing cables and in handling the engine. A well-equipped machine shop is being operated in connection with the plant by native workmen under the direction of the master mechanic.

There are about 400 Visayans on the payroll, and this number will be increased from time to time. The company provides sanitary homes for the natives, as is shown in an illustration accompanying this article. Each building in the different groups has three rooms where the workman may bring his family and live much more comfortably than in the nipa shacks on the plantations. Scrupulous cleanliness is required and a medical officer has been engaged by the company to look after the health of all the employees. The company has built an hospital where operations are performed and all are treated free of cost. The company has built several groups of these homes for the natives, making in all about 100, for the use of the laborers, and so far they are very contented and happy in their surroundings.

In addition to the provision made for their comfort and health, the company has built schoolhouses where the children of the employees may have the benefit of a liberal education. The province supplies the teachers and the text books only.

Law and order is maintained in all the villages on the company's concession by several policemen commissioned by the province and paid by the company. Gambling is restricted and no outsiders, agitators, or drones are permitted to loaf about any of the camps. Every able-bodied man, not a toiler, is considered a trespasser and is treated as such. The company takes a paternal interest in its employees and in sickness sees that the wants of the families of the afflicted are supplied. A company store has been established in connection with the mill and a market for local product is maintained where the farmers and others may offer their produce for sale every Saturday.

The company is equipped with its own transportation having purchased the fleet of the Philippine Transportation & Construction Co. These vessels are used to carry the lumber to Iloilo, Cebu, and Manila, the principal markets in the island and to carry supplies to the plant.

As soon as the electric light plant ordered has been installed the mill will be operated night and day. This will increase the output to 200,000 feet b. m. a day.

Mr. Johnson, the managing director, is satisfied with the native labor employed and taking everything into consideration claims he gets better results for the outlay in this direction than the mill owners in the United States from the labor they find available.

"The native labor utilized in every branch of our work has never given us any trouble," he said. "As a rule I have found it steady and reliable. We have many natives who have worked with us steadily for over three years. All the labor necessary has been available as required. It is true that it has been necessary to provide careful supervision of the natives at all times and great patience is exercised on the part of the white foremen. Very fortunately we have experienced, practical millmen in all the supervising positions, who are familiar with native labor, and the satisfactory results obtained are entirely due to this fact."

Asked as to the hardships, if any, of government supervision or excessive forestry dues, the managing director declared that in all the time the company has been operating, he has met with nothing but hearty co-operation on the part of the Forestry Bureau. The government collects an internal revenue of from one to two dollars gold a thousand feet and a percentage on manufacturers' gross sales of one-third of one per centum. The entire taxation is much less than the stumpage dues paid in the United States. The managing director is thoroughly satisfied in every respect with conditions in the Philippines and believes that capital will soon be brought to a realization of the many splendid opportunities for investment in the archipelago.

The Insular Lumber Co.'s mill is operated under the immediate direction of the following staff:

Superintendent, J. C. Nichols; chief millwright, E. E. McVicker; master mechanic, J. C. Penny; medical director and auditor, Dr. J. A. Rafter.

It is the intention of the management of the company to export a large percentage of its output and to supply the local market with the surplus. The China market will be given attention but it is not expected that China will take a very large quantity of this grade of lumber. The demand there is for poor grade lumber, which can be secured for less money elsewhere.

Sample shipments have been shipped to America of the company's Philippine mahogany, with the result that two different parlor car and street car manufacturers have used it and declared it superior to Central American mahogany.

HIS EXCELLENCY D. ARTURO BALDASANO Y TOPETE, CONSUL-GENERAL FOR SPAIN AT MANILA

Sr. Don Arturo Baldasano y Topete, who is now serving as consul-general for Spain at the capital of the Philippines, is the nephew of the famous Admiral Topete, who was prime minister at Madrid during the Spanish revolution with General Prim. Señor Baldasano is a native of Madrid and at the present time few if any diplomats are more favorably known in diplomatic circles. He entered the consular service and was appointed second class consul at Singapore in 1880 and remained at that post until 1883 when he was promoted to the grade of first class consul and transferred to New Orleans, U. S. A. He served there in that capacity until 1888 when he was again promoted to the rank of consul general and given station at Quebec, Canada. Here he served from 1888 until 1890 and from that time until 1907 he served as consul-general at New York for three distinct terms. These were divided as follows: from 1890 to 1893; 1894 to 1897 and from 1905 to 1907. His service in the United States and Canada extended in all over a period of 15 years. During the interval between 1897 and 1905 he was appointed consul-general to Algiers and later to London. While at London he was appointed to Hamburg, but later this was changed and he was sent to Genoa instead. In 1905 he was appointed to New York and early in the present year he came to Manila on Special Appointment.

HIS EXCELLENCY DON ARTURO BALDASANO Y TOPETE, CONSUL-GENERAL FOR SPAIN AT MANILA

As an indication of the high regard in which His Excellency is held by his sovereign and in recognition for his valuable services, the following list of decorations among many which he received may be taken cognizance of:

The Grand Cross (la Gran Cruz) entitling him to the rank of His Excellency.

Caballero de Carlos III.

Cruz de Tercera del Merito Naval.

Medalla de Cuba.

Comendador de Corona de Siam.

Comendador de la Revencion Africana de Liberia.

Caballero de Cristo de Portugal.

Medalla de la Sociedad Geografica de Madrid.

His Excellency has an interesting family of six sons and two daughters, all of whom were educated in the United States. Louis Baldasano y Lopez, the sixth son, took a course in mining engineering in King's College, London, England, where he graduated. This young man is making an enviable reputation in the mining world already although he is but 22 years of age. He is special representative of Messrs. Birch & Co. of London, one of the largest dealers in mining machinery in that city. The young engineer is now looking after the interests of his firm in Mexico and Central and South America. One of his most important accomplishments is the completion of a monster catalogue in Spanish with all its intricate terms and compilations for his firm. It comprises 650 pages and is splendidly illustrated throughout. The young author is to be congratulated on his achievement.

In all His Excellency was the father of seven sons, the eldest of whom died in New York about sixteen months ago. He had graduated in mechanical engineering from Steven's Institute, Hoboken, N. J., in 1897, and was associated up to the time of his passing out with the firm of Milliken Bros., New York. The death of this young and promising member of his family was a severe shock to His Excellency and influenced his leaving New York for the post at Manila.

LUIS BALDASANO Y LOPEZ, M. E.

MINING AMBER IN BURMA

Burmese amber is in good demand at fair prices, reports Consul-General W. H. Michael, of Calcutta, who adds:

It has a rich color, is hard, and takes on a beautiful polish. It is made into beads, which are used in the manufacture of rosaries and necklaces. Burmese amber is mined in the most primitive way, as indeed is almost all kinds of mining done in that quaint country of rich resources. Usually amber mining is done by Burmese who have finished their harvest work and have nothing else to do. Small parties form and dig down near to where amber has been found. One man digs and another hauls up the dirt with ropes, each man taking his turn at the bottom. They go down to a depth of 45 feet, and if no amber is found they abandon the hole and try again in some other place, always near to where amber has been found.

Through an inadvertence, proper credit was not given for the illustrations appearing in the September number, of views of prominent buildings in Hongkong. They were published through the courtesy of the publishers of *The Island*, an interesting and enterprising weekly of Hongkong.

NEW RUBBER COMPANIES

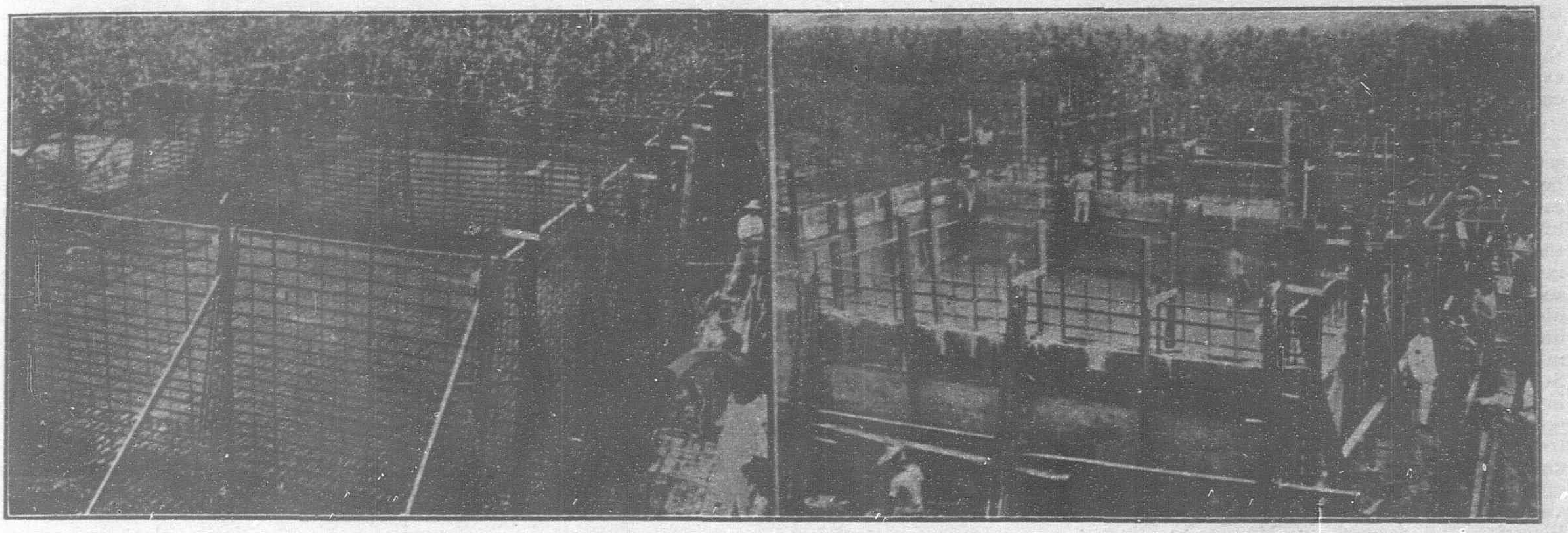
The Sungei Salak Company, with which Messrs. Lyall Anderson and Company are connected, is expected very soon now. Preliminary circulars were sent out about this Company, and good support was obtained, but the bringing out was suspended till a report on the properties had been obtained. This has now reached London and is of a favorable nature.

This company has been formed to acquire two rubber estates comprising about 3,078 acres in the Malay Peninsula.

The capital is £70,000 in £1 shares, of which 41,000 are offered for subscription at par. The purchase price has been fixed at £28,000, payable as to £14,000 in cash and £14,000 in shares, which seems fairly moderate as things go, but it should be noted that out of some 147,000 trees planted none will be ready for tapping till 1911 and 108,000 will not be ready illt 1913. It will therefore be at least seven years before any return on the capital can be expected, and the conditions in the rubber market may change very considerably meantime. It is a fair speculation, and appears to start under favorable auspices.

WATER AND SEWER SYSTEMS AT JOLO AND PARANG PARANG

With the completion of the contracts entered into with the military authorities by the American Hardware & Plumbing Co. of Manila the military post and town of Parang-Parang as well as that of Jolo were equipped with the most modern systems for the supply of pure water and a drainage scheme of the most sanitary character. These contracts were entered into on June 15, 1906, and the contracts were completed June 4, 1907, the day set by the terms of the contract. The outlay for the work at the two towns amounted to about ₱220,000.



WATER SUPPLY RESERVOIR AT JOLO BUILT OF REINFORCED CONCRETE AS IT APPEARED AT TWO STAGES IN CONSTRUCTION

The sewer system of the town of Jolo comprises a main 18-inch sewer with ten laterals covering the area of the walled city of Jolo and the Asturius military barracks, making in all about two miles of pipe. All the sewer pipes are of Australian glazed stoneware. The discharge is into the bay or open roadway and is conducted through two lines of 12-inch universal cast iron pipe. It is believed that this is the first universal pipe in use in the Philippines.

The waterworks is a pumping system, pumping water from a small river with a dam or reservoir to an altitude of about 90 feet nearby, into a reservoir constructed of reinforced concrete 40×80 feet and 10 feet 6 in. in depth. This reservoir is divided into two compartments each 40 feet square, so that one may be used while the other is being cleaned. Sixty tons of steel were used in the construction. The main supply pipe is of cast iron and runs about 4,000 feet to the main street of the walled city, where various laterals supply the government buildings.

Jolo has another water supply. It is a gravity system with an auxiliary pump service which has been turned over to the civil authorities for local supply.

These two systems are the property of the military in their entirety and were installed under the supervision of the quartermaster's department at a cost of about ₱100,000.

In connection with the water system there are 17 fire hydrants built for two and one-half inch hose and carrying a pressure of 40 pounds from the reservoir, but so arranged that direct pump pressure action may be had to meet any-emergency. Two Deane Steam Duplex Pumps having a 6 inch suction and a 5 inch discharge supply the reservoir. The valves used were supplied by Messrs. Crane Co. of Chicago, Illinois.

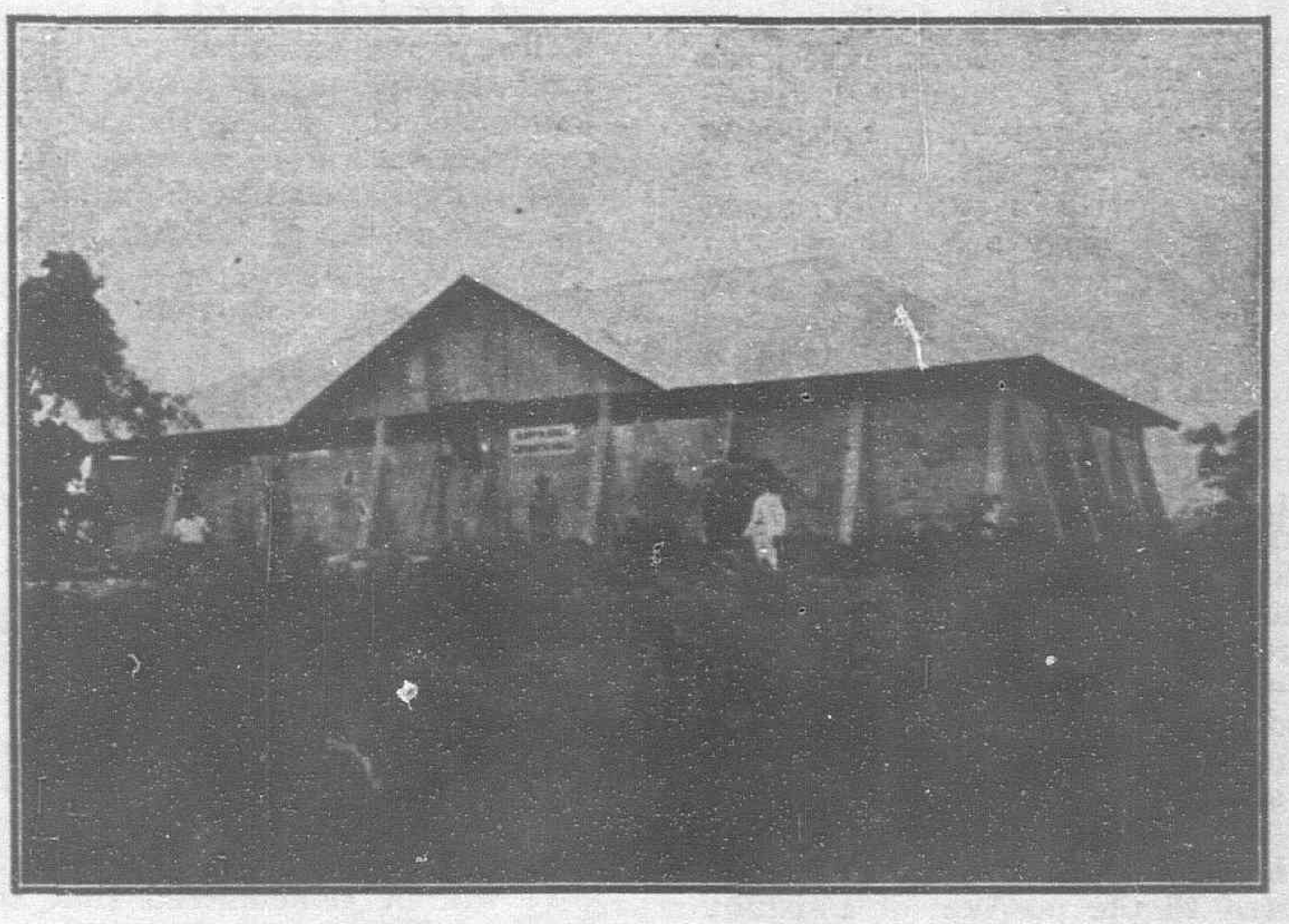
Parang-Parang Water and Sewer systems.—The water and sewer systems for the military post at Parang-Parang has a service attached for the town as well. Vitrified sewer pipe was used throughout in the installation. The piping is 12 inches and 9 inches in diameter and about 10,000 lineal feet were used. It was supplied from Australia. The discharge is into the bay of Parang through 12 inches cast iron universal pipe.

The water system is supplied from a river flowing into Pollok harbor near the town by means of a pumping station. Two duplex Deane steam pumps are utilized in pumping the water to an elevation of 275 feet into a wrought iron tank placed on a tower 100 feet in heigth. This elevation was necessary in order to give pressure to supply the hospital and other buildings which are situated at a higher altitude than the base of the tank tower. This tank holds 100,000 gallons and was shipped knocked down from the Chicago Bridge & Iron Works. Cast iron pipes were installed to carry the water throughout the system. The distance from the tank to the harbor is about 7,000 feet which with an elevation of 275 feet would give pressure of about 130 pounds at the wharf. This pressure is reduced somewhat by a small reservoir half way down the hill and the water in this reservoir is controlled by one of Crane Company's Ball Cocks built for 100 pounds pressure. The system is so arranged that at any one of the thirty fire hydrants there is a pressure sufficiently strong to throw water over any building in the post.

Steam is supplied by two 25 H. P. Atlas boilers. The suction of the Deane Duplex Pumps is six inch and the discharge five inches and are so arranged that either or both pumps may be used, giving auxiliary service.

The cost of these plants was about ₱120,000 and they were begun and completed simultaneously with the Jolo systems.

The town of Parang is supplied from this water service with a four inch main and five two inch fire plugs.



RESERVOIR AT JOLO COMPLETED

NEW SILK WORM

Mr. Iijima, Consul at Calcutta, reports that a German in Uganda, East Africa, has recently discovered a worm which yields silk It appears that these worms gather themselves into one mass, and make a nest, which they attach to the branches of trees of certain descriptions. The discoverer has left Uganda to study the relation and influence which this discovery may have on the commercial world. The discovery is reported to be attracting no small amount of interest among merchants of various countries.

RICHARD T. LAFFIN, FORMER GENERAL MANAGER AND VICE-PRESIDENT OF MANILA E. R. R. & L. CO.

Mr. Richard T. Laffin, formerly general manager and second vice-president of the Manila Electric Railroad & Light Co. who resigned from that position recently on account of ill-health and whose departure to the homeland will be sincerely regretted by the business community of Manila, is one of the most experienced of contemporary electric railroad managers. It might be said that he grew up under the influence of the expansion and general utility of electricity as a motive power in solving transportation problems. He studied all the practical phases of the business and is familiar with the duties and responsibilities of each and every official and employee of an electric railway system. It is largely due to this knowledge that he has met with the success that has marked his administration in whatever capacity he served in his interesting career.

Mr. Laffin was born in the state of Maine, May 27, 1862. He was educated in the public schools of his native state and at the age of 18, he moved to Boston where he first became associated with city railway work. He worked his way up the ladder from motor man through the different grades until he was made superintendent of one of the main lines of the consolidated system. It was not long before his splendid executive ability was recognized and in 1901 he accepted the position of general manager of the Worcester (Mass.) Consolidated Street Railroad Co. This position was an important one as the company controlled and operated 160 miles of lines and served seventeen cities. He remained with this company until 1904 when he received an attractive offer to accept the position of general manager and vice-president of the proposed Manila Electric. He arrived in Manila in January 1904, and directed the destinies of the system until his resignation, September 1.

Mr. Laffin is interested in the development of the mineral wealth of the Philippines and is president of the Bua Mining Co. of Benguet. During his service as general manager of the railroad he won the regard and confidence of the public and ever expressed the greatest confidence in the future of the archipelago. He leaves for the United States in January to recuperate his health.

Charles B. Graves, assistant manager of the company who succeeded Mr. Laffin as second vice-president and general manager is a practical electrical engineer of wide experience in railroad construction and electrical installation as well as management of power plants and the direction of railroads. Mr. Graves was born in Massachusetts in 1870 and moved west to Oregon at an early age. He worked in the engineering department of the O. R. & N. Co. where he acquired his first taste of mechanical engineering. Later he took a course in mechanical and electric engineering at Tuft's College and graduated in 1897. From that time until he accepted the position of superintendent of light and power with the Manila company he was engaged in construction and operation of railway systems throughout the United States, Brazil and Canada. From 1899 until his contract with the present company in 1905 he served in the capacity of electrical engineer, assistant manager and construction engineer.

During the absence of Manager Laffin in the United States Mr. Graves was in charge of the system as acting manager and about this time he was promoted to the position of assistant manager from that position to general manager and second vice-president of the company. Mr. Graves' foreign experience makes him familiar with every feature of railroad management and indicates a continuation of the successful administration that has characterized the direction of the company since its organization.

PHILIPPINE RAILWAY CONSTRUCTION

With the improvement of weather conditions, construction on all the different lines in the archipelago during the month received added impetus. The Manila Railway Co., the concessionaires for the Luzon lines, have made marked progress during the month and there is every indication that the company will fulfill the terms of the concessions long before the date required by contract.

The Dagupan-San Fernando de Union line has been completed and steel laid to San Fabian, a distance of twelve and one-half kilometers, most of which is ballasted.

The line from San Fabian to Camp One has been graded for a distance of 12 kilometers. and steel has been laid for ten kilometers. On his trip to Baguio, Secretary Taft proceeded to the end of the steel by special train and from there by automobile to Camp One.

The Florida Blanca line has been graded its entire length, a distance of 25 kilometers, and the steel has been laid for 12 kilometers.

On the Batangas line three kilometers of track have been laid and 50 kilometers graded out of the total of 108 kilometers that constitute this line.

Three kilometers of track have been laid and the total length of the Manila belt line from Santa Mesa to Paco has been graded, a distance of 9.1 kilometers.

On the Antipolo line two additional kilometers of track have been laid between Taytay and the terminus.

The Cavite short line, which will be 32 kilometers in all when completed, has been graded for 25 kilometers and the steel has been laid for about five miles.

The Philippine Railway Co. is meeting with the greatest degree of success in the construction of their lines in Cebu and Panay and the traffic on the 25 mile section since the mixed construction passenger and freight train was made a daily adjunct to the road, has been most encouraging. There are about 60 miles of grading completed in Cebu and 27 miles of track laid. The laying of track will continue at the rate of about five miles a month.

In Panay steel has been laid for five miles and the grading covers a distance of 25 miles.

Work has been progressing favorably on buildings and masonry and the foundations for the bridges and culverts will be completed in time for the steel as it arrives. Some of the latter is expected at the end of this month. In Iloilo concrete piles are being used in preparing the foundations for the buildings. Seven depots are under way in Cebu.

CHINKIANG SECTION SHANGHAI-NANKING RAILROAD OPEN

The construction of the Shanghai-Nanking Railway was extended to Chinkiang and the road thrown open to traffic October 15. This announcement would indicate that the road construction was more rapid than anticipated. The British consul at Chinkiang in his report for 1906 on the probability of railway connection with Shanghai, gave as his opinion that it would not reach that point before 1908. He said:

"The construction of the Shanghai-Nanking Railway is proceeding but will not, for at least two years, be sufficiently completed to show what effect if any the railway will have on the trade of Chinkiang. Opinions are divided but as the railway does not open up any new route, and Chinkiang is well served with waterways, the probability is that the conditions of Chinkiang trade will not be particularly affected."

In the construction of the Chenkiang section there were over a thousand feet of tunneling and many difficult cuts which presented many unexpected difficulties.

It will be remembered that the Shanghai-Soochow-Wusieh sections of the Shanghai-Nanking Railway was opened to traffic in July of last year and the work has progressed over section by section ever since.

This railway is being constructed by the British and Chinese Corporation under a concession from the Peking government. The firm of Messrs. Jardine, Matheson & Co. are in charge of the construction and operation and the Hongkong and Shanghai Banking Corporation is financiering the project.

When completed, this line will tap a fertile area of 45,000 square miles with a population of about 35,000,000.

SAIGON RICE MOVEMENTS

The total export of rice from Saigon from January 1st to September 20th of this year amounted to 14,372,100 piculs of which 1,049,100 piculs were shipped to the Philippines. The best customer was Hongkong to the amount of over six and one-half million piculs.

CEMENT WORKS AT CANTON

The Canton correspondent of the *China Mail* under date of September 13 says:

"The contracts for the long talked of Cement Works, which the Chinese Government propose to erect at Soo Fong Wei on the Island of Honam just above the salt flats, have been signed, and the work of construction was commenced today by the driving of the first pile.

The sum of about $300,000 is to be expended for buildings and machinery. The iron and steel materials are to be furnished by Messrs. Howarth Erskine and Co. who are general contractors for the buildings. The machinery is to be supplied by Messrs. Carlowitz and Co. The architects and engineers in charge of the construction are Messrs. Purnell and Paget of Shameen, Canton.

The dimensions of the main buildings are as follows: Cement Mill, 42 feet long, by 74 feet wide, and 26 feet high; Clay Drying Plant, 88 feet long, 52 feet wide; Barrel Making Plant, 156 feet long, by 56 feet wide; Drying Plant, 132 feet long, 65 feet wide; Engine House 152 feet by 71 feet wide; Kiln Plant, 163 feet long by 45 feet wide; Boiler House 102 feet long by 71 feet wide; Packing and Storage Room 132 feet long by 105 feet wide; Preliminary Drying Chamber 152 feet long by 83 feet wide; Raw Material Mill and Brick Mash 152 feet long by 83 feet wide.

There are to be two lifts, each 8 feet 9 inches by 19 feet 6 inches, having a height of 64 feet. The foundations are to be completed early in January 1908. The entire plant is supposed to be in working order by the end of 1908.

The capacity is to be 500 barrels a day. The total area of the plant is about 60 acres. The site now presents a busy scene. Temporary offices for the Chinese officials are being erected, and numerous matsheds are already up. Quarters for the cement company's staff are to be put up at once, and quarters for the employees will also be erected adjoining the plant. A number of competent Chinese engineers have been engaged by the Government.

YLANG-YLANG IN LABUAN

Visitors to the recent Agri-Horticultural Show in Kuala Kangsar were much attracted to the government exhibits from Labuan and Brunei. Amongst these, not for competition, were included samples of Essential Oils distilled on Pulo Daat Estate, Labuan, consisting of several varieties of oils of the Citrus family, and a novelty in the shape of a fine sample of Attar of Ylang-Ylang (Ol. mona odorata filipinensis), which is a speciality of this estate, and, as far as we can ascertain, the first instance of its production in a British Colony

This oil was introduced originally into Europe from Manila, in the early sixties of last century but it was not until 1878, when it was first exhibited at Paris, that the oil became widely known.

The owner of Pulo Daat, who is a practical and observant horticulturist and was many years resident in the Philippines, introduced the tree to the Colony, where, during the last six years, he has gradually laid out a large plantation now just commencing to flower. The oil sent to Kuala Kangsar was part of the first distilled. Only small quantities of oil will be made during the present year; next year, distillation will be carried on extensively, and the oil will be placed on the market.

It is understood that it is the intention to form Pulo Daat into a Company and plant the reserve land with Para rubber, of which a few acres have been already planted, some trees being six years old and all are thriving well. Besides Ylang-Ylang, there are some 20,000 cocoanut trees on the island, and, rather strange for these parts, a flock of sheep thoroughly acclimatised and breeding prolifically.—*Straits Budget.*

FAR EASTERN COMPANY REPORTS

HOKKAIDO COLONIAL BANK

At a general meeting of the shareholders of this institution the report adopted showed a net profit of 243,000 out of which 110,400 was paid in dividends.

BANK OF FORMOSA

At a general meeting of the shareholders of the Bank of Formosa held in Tokio, September 2nd, a dividend of 10% was declared for the year, 105,000 yen was placed in the reserve funds and 98,052 yen carried forward.

BANK OF JAPAN

At the fifteenth annual meeting of the shareholders of the Bank of Japan a gross profit of 3,060,467 yen was announced for the year. Out of this a dividend of 12% was paid and 1,198,467 yen was carried forward.

CHARTERED BANK OF INDIA, AUSTRALIA & CHINA

Advices from London announce that an interim dividend of 13% has been declared for the half year ending June 30, 1907, free of income tax, by the Chartered Bank of India, Australia and China.

YOKOHAMA SPECIE BANK

This institution has declared a dividend of 12 % per annum, transferred 500,000 yen to the reserve fund and carried forward 1,955,000 yen.

STEAM LAUNDRY CO. (LTD.)

For the year ending May 30, 1907, a dividend of 40 cents a share was paid September 19. This is equal to 6.75% at present quotation.

THE FORMOSA SUGAR MANUFACTURING CO.

At the recent semi-annual meeting of this company the report submitted showed a net profit for the half year of 266,950 yen out of which a half yearly dividend of 10 % was directed paid.

THE DOUGLAS STEAMSHIP CO.

At a meeting of the shareholders of this company, held on September 28, a dividend of 8% was declared which absorbed $80,000. In addition to this there was a balance of $37,488.15 to the credit of profit and loss for the year ending June 30, 1907. This amount was written off from the values of the company's properties at the end of the fiscal year.

TOKIO BAY STEAMSHIP CO.

This company directed that a dividend of 11% for the year be distributed among the shareholders. This amount was represented by yen 31 000.

URAGA DOCK CO.

The report submitted at the general meeting held at the Bankers' club recently showed a loss of 6,000 yen. An extraordinary meeting has been called

JAPAN MARINE INSURANCE CO.

The net profit of the Japan Marine Insurance Company for one year just closed has amounted to -Y-329,000, including a surplus brought over. On this sum -Y-17,000 has been placed to the legal reserve, -Y-20,000 to the special reserve, -Y-25,000 for bonuses of officials, -Y-75,000 for a dividend at the rate of 10 per cent., -Y-150,000 for an extra dividend at the rate of 20 per cent., a surplus of -Y-41,000 being carried forward. The Board of Directors has decided to call up -Y-2.50 on each share, keeping back this sum from the extra dividend. When this has been done, the total amount of the paid-up capital of the company will be increased from -Y-750,000 to -Y-900.000.

TOYO KISEN KAISHA

At a meeting of the shareholders of this company on Sept. 20, a dividend of 12% was declared.

HONGKONG HOTEL CO. (LTD.)

The Hongkong Hotel Co. has declared a dividend of $4 a share for the half-year ending June 30, 1907. This is equal to ten per centum per annum on the market quotation for this stock.

HONGKONG COTTON SPINNING, WEAVING AND DYEING CO. (LTD.)

This company has declared a dividend of 50 cents for year ending July 31st, 1907. This equal to a dividend of 4.75%.

MAATSCHAPPIJ TOT MIJN-, BOSCH-EN LANDBOUWEXPLOITATIE IN LANGKAT

This company has declared a third interim of Tls. 7.50 making Tls. 22.50 for account 1907.

THE PAKNAM RAILWAY CO.

At a meeting of the directors of the company at Bangkok a half-yearly dividend of 6% was declared with a bonus of 2%. The traffic receipts for the period were the highest in the history of the company.

SIAM ELECTRICITY CO.

A half yearly dividend of 6% was declared by the directors of the company at the recent half-yearly meeting. No bonus was announced.

THE SIONE RUBBER CO.

The third annual meeting of the directors of the Sione Rubber Co. was held recently in Singapore and a dividend of seven and one-half per cent directed paid. The sum of $1,500 was set aside to renumerate the directors.

TRONOH MINES (LTD.)

The Tronoh Mines recently declared an interim dividend of one shilling. This makes in all six shillings for 1907 to date.

BLACK WATER ESTATE RUBBER CO.

The directors of this company have declared an interim dividend of 7%. The report for the half-year ending June 30 showed a netprofit of R25,106.33 or almost 13% on the paid up capital.

THE PUSING LAMA TIN MINES

A dividend of two shillings has been declared by this company made payable in London Sept. 3.

NORTH BORNEO TRADING COMPANY LIMITED

Mr. A. Scrutton, presiding at the meeting of the North Borneo Trading Company on 23rd inst., said the directors regretted to present so unsatisfactory a report, the gross trading profit having been only £1,162, as compared with £3,297 last year. The condition of things in China offered a full explanation of the position. Mr. Bennett (the managing director) said the reduced profit was due to the falling off in the China shipments. The Hong Kong timber market had also been depressed, their shipments to that port showing a drop of 46 per cent. Their Sekong rubber estate, which had been very favorably reported upon, would be sold, and the money devoted to developing other estates. The report was unanimously adopted.

SHANGHAI-SUMATRA TOBACCO CO. (LTD.)

An interim dividend of Tls. 5 equal to 25% was paid by this company on Sept. 10th, 1907.

HONGKONG APPROPRIATION FOR 1908

The public service appropriation for Hongkong for the fiscal year 1908 amounts to $4,992,993 and is itemized as follows:

Governor	$ 77,124
Colonial Secretary's Department and Legislature	71,621
Registrar General's Department	38,691
Audit Department	19,531
Treasury	57,654
Post Office	410,514
Harbor Master's Department	158,655
Harbor Office—Special Expenditure	1,000
Observatory	18,662
Miscellaneous Services	204,655
Judicial and Legal Departments	193,295
Police and Prison Departments	699,138
Fire Brigade—Special Expenditure	51,000
Medical Departments	237,000
Sanitary Department	446,393
Botanical and Forestry Department	48,773
Education	200,026
Military Expenditure.—	
Volunteers	45,916
Public Works.—	
Public Works Department	268,126
Public Works, Recurrent	437,500
Public Works, Extraordinary	822,900
Charge on account of Public Debt	275,013
Pensions	196,000
Charitable Services	13,765
Total	$4,992,953

KOOTENAY STEEL WORKS

A gigantic organization has been formed by Canadian capitalists for the purpose of establishing a large blast furnace at Kootenay Landing, British Columbia, for the purpose of supplying the Orient as well as the western slope with steel rails.

The ownres of the property are Sir Thomas Shaughnessy, president of the Canadian Pacific Railway; Charles Hosmer, of Montreal, and other Eastern capitalists. C. P. Hill, manager of the Hillcrest Coal Mines of Alberta, made this announcement. He said: "Within two years we will be supplying steel rails to all points on the continent west of the Rockies, as well as to the Orient. I have been authorized by members of the company to lay out a comprehensive plan of development involving an expenditure during the next year and a half of $2,500,000. The plans are being drawn now by a Pittsburg engineer. The iron veins on the property have been traced a distance of seven miles. They are ten in number and the widest has a thickness of twenty-three feet. We have plenty of flumes in proximity to the iron deposits. We will develop a large water power from Elk and Goat rivers. The ore will be handled to the Canadian Pacific Railway line at the rate of 3,000 tons per day."

AMUR RAILWAY SURVEYS

The preliminary surveys for the Amur Railway have now been completed. Three alternative routes, says a Moscow correspondent, have been considered, but there are overhelming advantages in favor of the one running along the right bank of the Zea, a tributary of the Amur, which it joins at Blagoveschensk. The ordinary post post road runs along the left or north bank of the Amur, and the Zea runs parallel to the Amur for about 200 miles, at a distance from it of 100 miles, away to the north. The choice of this route provides Russia with what is practically a second frontier. By carrying the line of cross country railway 100 miles back from the Amur, the chances of successful attack upon it in case of war are removed. At the same time, the line will open up the richest grain growing land east of Lake Baikal. The land along the Zea valley already supplies the Amur region with a large part of its corn, and a railway through it will, it is calculated, open up a grain growing district about the size of England, between the Zea and Selena rivers.

Mines, Mining and Minerals in the Philippine Islands

(Edited by the Bureau of Science, Manila)

A GEOLOGICAL RECONNOISSANCE OF THE BATANES ISLANDS

The Batanes Islands lie between latitude 20° 16′ N. and 21° 05′ N. (or 21° 13′ N. if "existence doubtful" Bashi Rocks are included) or approximately the latitude of the southern half of the Hawaiian Islands, and between longitude 121° 49′ E. and 122° 02′ E. Y'Ami, the most northern island of the group, is about 270 kilometers from the nearest point of Luzon, Cabo Engaño, 107 kilometers from the Japanese island of Little Botel Tobago and 160 kilometers from the southern point of Formosa. On a very clear day the Formosan mountains can be seen from the summit of Mt. Iraya in Batan Island. The Bashi Channel with a minimum depth of 1009 fathoms separates the islands from Formosa and Botel Tobago on the north, while to the south the Balingtang Channel with a sounding of 95 fathoms (without bottom) lies between these islands and the Babuyanes group. The Balingtang Islands, lone rocks rising perpendicularly from the sea, lie in the center of the Balingtang Channel and form a connecting link between the Batanes and Babuyanes groups.

The islands forming the group are Y'Ami, Maysanga, Mabudis, Siayan, Isbayat, Inem, Batan, Sabtan, Ibujos and Desquey. The first four of these are simply barren rocks of volcanic material surrounded by coral reefs, and locally known as the Siayanes meaning, as I was told, "good fishing grounds." The natives, however, seldom venture among these islands, as, north of Isbayat, there is a strong northerly current which has often carried their boats to the Japanese island of Botel Tobago, and they have many stories of fights with the savages of that island.

The only inhabited islands are Isbayat, Batan, Sabtan, and Ibujos. Isbayat, the largest and most fertile of the group, is entirely cliff-bound. There are only two places at which landings are possible, one by means of steps cut down through the rock and the other by ladders. The land slopes inward from the cliffs and the villages are situated in small "sinks." The island has a bad reputation for fever, and the natives of the other islands will not go there. Batan is the most thickly populated. Santo Domingo de Basco is the largest town, having a population of something over two thousand and a good harbor. Overlooking the town is the beautiful mountain of Iraya (height 3806 feet), an extinct volcano. To the south and west of Iraya is a fertile plain formed by wash from the mountain. The southern and central part of the island is rugged and mountainous. Except on the slopes of Mt. Iraya and in the central part, the island is not wooded, but, where not under cultivation, is covered by short grass which makes excellent pasture land. Sabtan, southwest of Batan, is more rugged and contains much less arable land. The land rises rather steeply from the eastern shore to a plateau with an elevation of from 1000 to 1200 feet, which breaks off sharply in a line of cliffs on the west. The principal town of Sabtan is San Vicente on the east coast where steamers can anchor when southwest winds make Santo Domingo de Basco unsafe. Because of the numbers of destructive baguios which afflict the islands, all the houses are built of stone, which adds greatly to the picturesqueness of the country. Ibujos is a small coral island, entirely treeless, cliffbound except on the western side where a landing can generally be made across the coral reef. Desquez is similar to Ibujos but entirely cliffbound. Inem (wrongly called Diojo on the charts) is a single peak rising to a height of over 1800 feet and undoubtedly of volcanic origin.

The Batanes people form a distinct race speaking their own language, which is entirely different from the Ilocano dialect. They are kind, intelligent, enterprising, and extremely industrious, having a reputation, throughout northern Luzon, of being excellent workers. The daily wage paid in the Batanes is about ₱0.25.

General Geology.—A volcanic agglomerate, a rock formed of a heterogeneous mixture of angular pebbles and boulders of different lavas, forms the basal rock of the islands. It occurs in the islands of Sabtan and Batan, in the former as a high plateau with an elevation of from 1000 to 1200 feet and in the latter as a series of irregular ridges reaching a maximum elevation of 1500′. This agglomerate is probably of Miocene or earlier age and is cut by dikes of basalt and andesite which may have been feeders to old volcanoes. Upon this basal formation rest various limestone terraces showing recent uplift, and geologically recent lavas from the extinct volcano of Iraya.

The three western islands, Ibujos, Desquez, and Isbayat are composed entirely of limestone and seem to be separated from the others by a fault. This fault line probably extends through the Babuyanes as well, separating the limestone islands of Fuga and Calayan from the volcanic islands of Babuyan Claro and Camiguin. Inem and the Siayanes islands seem to be remnants of a chain of volcanoes which extends along the 122nd meridian, through the Batanes to Cagua volcano in northeastern Luzon.

Economic Geology.—The only good harbor in the Batanes is Santo Domingo de Basco in the northern part of Batan Island, and this is entirely exposed to winds from the southwest so that during the prevalence of these winds ships must lie off San Vicente de Sabtan. With the exception of Santo Domingo de Basco all the towns of the islands are situated back of coral reefs through which narrow and often very crooked passages allow access for small boats.

Dampier, in describing his discovery of the Batanes Islands (named by him Bashi Islands) in 1671, says: "Both sexes wear earrings of a yellow metal (they dig out of their mountains) having the weight and colour of true gold but something paler; whether it were such in effect or no, I am not able to say, for it looks of fine colour at first but afterwards fades, which makes us suspect it, therefore our people did not purchase much of it. We observed the natives to besmear it with red earth, and then, putting it into a quick fire till it was red hot, brought it to its former colour again." One of the Dominician Friars told me that formerly the ornaments in the churches were of Batanes gold, but that these had all been carried away in the looting of the churches by the Katipunan army. Many of the women wore heavy gold earrings and bracelets, often of excellent workmanship. These, I was told, were all of Batanes gold. The gold was of a light greenish-yellow color, answering perfectly to Dampier's description. It is also an interesting fact that the natives use the same method of baking it in red clay to put the desired tarnish on it. All of these ornaments were family heirlooms and all had been handed down for at least three generations. From what information I could gather it would seem that up to about forty years ago the natives washed gold from the streams draining the region of volcanic agglomerate on Batan and Sabtan Islands, but that the yield became so small that work was abandoned and panning is now a lost art. The last stream to be worked was one on the island of Sabtan between the barrios of Santa Rosa and Santo Tomás. It is of course possible that with more modern methods these streams might be re-worked with some hope of profisbut it seems rather doubtful and the inaccest, ibility of the islands would hinder work on a large scale.

Two veins were sampled, one, near San Carlos de Magatao, showing a series of small veins cutting an andesite dike with limonite at their outcrop, and the other about a mile north of Itbod being a fault gouge of considerable thickness with pyritized andesite on either side. The assays, however, gave practically no values.

As far as I could find out no lode mining was ever done by the natives or Spaniards.

The later lava flows from Mt. Iraya are often copper stained, and in one place I found a small vein of malachite. It was not over a couple of inches wide, however, and in a rather inaccessible place.

On the beaches along the north coast of Batan there is a considerable amount of pumice. It might be profitable to collect and ship this.

HENRY S. FERGUSON.

THE SULPHUR DEPOSITS OE CAMIGUIN ISLAND

Camiguin Island is the south eastern island of the Babuyanes group. It forms one of the chain of volcanic islands which follow the 122nd meridian, the position of Camiguin volcano being Lat. 18° 55″ N., Long. 121 ° 52″ E., and lies about 45 kilometers north-west from Cabo Engaño and about 60 kilometers north-northeast from Aparri. No steamers call at Camiguin and the only communication is by native boat from Aparri. During the months of September, October, and November no boats whatever visit the island.

The entire population numbers about eighty, of whom thirty are able-bodied men. The natives are lazy and shiftless and live on the verge of starvation in spite of the rich soil and excellent forests. During most of my stay there I found it impossible to hire laborers at any price. Mr. Meyler, who has lived there for several years, tells me that it is practically impossible to get laborers on the island or to induce laborers from the other islands or Luzon to come to Camiguin, even at double and treble the ordinary rates.

The island is about 20 kilometers in length in a northeasterly direction and has a maximum width of 12 kilometers. It is heavily wooded and there are no trails except along the beach for short distances from the barrio, hence the interior is practically inaccessible. The interior is mountainous, the highest peak in the northern part having an altitude of 2747 feet. The northern mountains are sharp, and form a range running parallel to the long axis of the island. As far as I could see none of these mountains seem to be recent volcanoes, although it is perfectly possible that they may be the erosion remnants of former ones. Camiguin volcano stands alone in the southern part of the island. No eruptions have ever been recorded from this mountain, it is everywhere heavily wooded and what outcrops of lava were found were considerably decomposed. The form of the mountain is not so symmetrical as Mt. Iraya in the Batanes Islands, nor is the crater so well defined, but like Iraya there are the ruins of an old cone which has been blown away and a new cone built up inside the old one. To the north of the mountain is a plain formed of lapilli and bits of pumice.

Camiguin has a bad reputation throughout the other islands and northern Luzon because of the prevalence of fever. The natives all live on small swampy plains which have been built up by the streams and which are partly surrounded by evil-smelling marshes, so that it is not surprising that malaria and dysentery are prevalent.

The coast for the most part is irregular and uninviting and surrounded by a wide coral reef. Porto San Pio V., however, is an excellent natural harbor, far better than Aparri or Santo Domingo.

Geologically, the island consists entirely of two kinds of lavas, andesite and basalt, the former predominating, with subordinate amounts of volcanic agglomerate. A peculiar feature is the absolute lack of limestone terraces or raised beaches, showing that Camiguin has not joined in the recent general uplift of the Philippines.

On the southern shore are two springs of scalding water analyses of which, made by Mr. V. L. Gana of the Bureau of Science, gave the following results:

No. 1 Spring on south coast	Parts per million	Per cent of total solids
Total solids	5720.7	100
SiO_2	173.8	03.04
Al_2O_3, Fe_2O_3 (mostly Fe_2O_3)	737.2	12.89
Mn_3O_4	87.8	01.53
CaO	352.0	06.15
MgO	184.0	03.22
SO_3	1207.7	21.11
K_2O	188.2	03.21
Na_2O	1198.8	20.96
Undetermined, mostly organic matter, chlorine and CO_2	1598.8	27.81
	5720.7	99.92

No. 2 Spring on south west coast.	Parts per million	Per cent of total solids
Total solids.	20092.6	100
SiO_2	178.6	00.89
$Al_2O_3\ Fe_2O_3$	12.2	00.06
Mn_3O_4	-------	------
CaO	575.4	02.86
MgO	696.4	03.47
SO_3	700.4	03.49
K_2O	836.9	04.16
Na_2O	7970.6	39.67
Undetermined, mineral, mostly organic matter, chlorine and CO_2	9122.1	45.40
	20092.6	100.00

Besides these there are numerous other sulphur and iron springs in western and northern parts of the island which are slightly warm or cold.

Economic Geology.—The principal feature of the economic geology of Camiguin is its solfatara on the west flank of the mountain about a mile from the sea. This is between a quarter and a half mile in length and several hundred feet wide, following a dry stream bed. The sulphur is very fine and while of course the depth of the deposit is unknown there seems to be a considerable amount of it. The stream vents are not very numerous and there is no troublesome flow of hot water. A solfatara which had been worked commercially in Iceland had a smaller surface area of sulphur, less favorable topography, no local fuel supply; a stream of scalding water had to be diverted before operations could be begun, work could only be carried on during a part of the year and the sulphur, not as pure as the Camiguin sulphur, had to be carried by ponies a three days journey over rough mountain trails to the point of shipment and all supplies carried in the same way. It was this last item which caused the abandonment of the Icelandic sulphur. If test pits should show the Camiguin deposit large enough to warrant development, there is abundant wood-fuel at hand and the sulphur could be purified before shipment. It would only be necessary to pack the sulphur about a mile to the beach where it could be sent by native boat to Aparri and there transhipped (or purified there, as there is an undeveloped coal deposit not far up the Cagayan river) or else it could be carried by small boats to Porto San Pio V where steamers might call. The chief problem would be labor. This would be the greatest difficulty as it is doubtful if the natives of northern Luzon or the Batanes could be induced to work on Camiguin Island. The isolated situation and the long stormy season are also drawbacks.

An analysis of an average sample of this sulphur for percentage of sulphur and the two impurities which cannot be freed, arsenic and selenium, made by Mr. W. C. Reibling of this bureau, gave the following result:

Sulphur	81.6%
Arsenic	Trace only.
Selenium	None.

I am informed that on the east flank of the mountain there is another even larger solfatara, but I was not able to visit it.

The sulphur of Camiguin deserves investigation. Test pits should be sunk to bed rock to ascertain the depth of the deposit in the known solfataras and the region around the volcano should be thoroughly explored in the hope of discovering new deposits. Native information cannot be depended upon as the natives have a superstitious dread of the mountain and it is only with great difficulty that they can be induced to go there.

Besides the sulphur there is a cave on the south coast where there is a coating of a mineral which analysis show to be a mixture of aluminum, magnesium and sodium sulphates apparently corresponding to the rare mineral *stuvenite* as given in Dana's system. No great amount is present and its only value would be as a mineralogical curiosity. A small amount of impure gypsum is associated with it.

On the eastern coast of the island there is a point where the natives obtain excellent whetstone. I was unable to visit the deposit, which was described to me as "a whole mountain of the stone." No microscopic examination or analysis has yet been made, but the stone seems to be in the nature of a siliceous deposit, probably from spring.

HENRY S. FERGUSON.

Dr. J. R. McDill, vice-president of the Lepanto Mining Co. arrived in Manila from the United States with Secretary Taft and party.

Leonard Lehlbach, mining engineer and director of the Lepanto Mining Co., arrived in Manila on the 14th of the month after an extended trip to the United States on business for the company.

A. Heise, president of the Eastern Mining Co. of Masbate returned to the Philippines early in the month after a successful trip to the United States in the interests of his company.

CURRENT NEW YORK WHOLESALE PRICES OF METALS, MINERALS, CHEMICALS, ETC.

Selected from the Engineering and Mining Journal

		U. S. Currency.
ABRASIVES.—		
Bort, good drill quality	carat	$ 85 00
Carborundum, grains	lb	.10-.17
Corundum	"	.07-.10
Emery, grain	"	.035-.045
Pumice Stone, American powdered	100 lbs	1.60-2.00
ACIDS —		
Hydrochloric 20°	lb	1.25-1.50
Nitric, 38°	"	4.25-4.625
Sulphuric, 66° bulk	ton	18.00
Aluminum, 99%	lb	.36-.39
Antimony, needle	"	10-11
Arsenic, white	"	.07¼- 07½
ASBESTOS.—		
No. 1, crude	sh. ton	233.00
Fiber No. 2, paper stock	"	17.20
ASPHALTUM.—		
Trinidad	ton	30.00-32.50
California	"	22.50-30.00
Bleaching powder, 35%	100 lb	1.25-1.40
Blue Vitriol	"	7.25
Bone Ash	lb	.02¾-.04
Borax	"	.07¼-.08
*Caps detonating	M	7 50
CEMENT.—		
Portland, American	500 lbs. bbl	1.55-1.60
Foreign	" "	2.25-2.90
Rosendale	300 " "	.85
*Green Island	375 lb. bbl	2.65
*Alsen		2.75
*Dromedary		2.50
*Rizal		2·50
*Independencia		2.50
CLAY, CHINA.—		
American common	lg. ton	8.50-9.00
Foreign	"	11.50-17.50
COALS.—		
Japanese		5.75
Australian		6 00
Copper	lb	.215-22
*Dynamite 40%	"	.20
Feldspar ground best	sh. ton	14 00
Fire brick American	M	30.00-40.00
Imported	"	30.00-45.00
Fire clay, St. Louis Mill	ton	2.50
*Fuse-Blasting	1,000 ft	7.50
Graphite-American ore, common	lb	.01.10
Artificial	lb	.06
Guano	sh. ton	
Gypsum-Fertilizer	sh ton	7 00
Powdered	sh. ton	10 00
Lead	lb	.05 05¼
Magnesite-Greece, crude, 95%	lg. ton	7.00-8 00
Bricks, domes	per M	160-200
Manganese, pure, 98-99%	lb	.75
Ore, 80-85%	sh. ton	35 00-60 00
Mercury, export flask	75 lbs	41 00-42.00
PAINTS AND COLORS.—		
Litharge American P'w'd	lb	.07¼-.07¾
Ochre, Am. Com	sh. ton	8 50-9 00
Paris green, pure, bulk	lb	.26
Turpentine, spirits, bbl	gal	60½
White lead, Am. dry	lb	.06⅝- 07
Am. in Oil	"	.07½-.07½
Zinc, white, Am. extra dry	"	.05⅝-.05½
Phosphates, Acid	per unit	.65-.67½
Florida hard rock	lg. ton	10.25-10 50
Land pebble 68%	"	5.75-6 00
Potassium Cyanide (98-99%)	lb	18.-.19
Platinum	oz	26.00-28 50
*Powder, black blasting A	lb	.15
*Judson	"	.13½
Pyrite, Domestic Non-arsenical, lump	unit	.11-.11½
Imported non-arsenical lump	"	.13-.14
Imported, arsenical	" "	.12½-13
Saltpeter crude	100 lbs	4.25-4 50
Silica, Lump quartz	lg. ton	2 50-4.00
Ground quartz, ordinary	"	13 00-15.00
Glass sand, ordinary	"	2 75
Silver	oz	.679
Sodium cyanide (100% KCN)	lb	.18-.1½
*Steel, octagon drill	lb	.14
Sulphur, Louisiana prime	lg. ton	22.12½
Roll	100 lbs	1.85-2.15
Flowers sublimed	"	2.20-2.60
Talc—Domestic	sh. ton	15 00-25 00
Italian, best	"	35 00-40.00
Tin	lb	.40¼
Zinc, metallic ch. pure	"	.15
Dust	"	.05⅞-.06¼

*Manila quotation.

"IDEAL" MACHINES FOR MEXICO

The success of the Ideal Concrete Block Machine, its universal adoption, and the increasing demand from every country in the civilized world, is a modern proof of the ancient saw that "it never rains but it pours."

There has recently left the factory of the Ideal Concrete Machinery Co., of South Bend, Ind., the third car-load of a four car shipment of Ideal Concrete Block Machines to Mexico. The fourth car-load is practically ready for shipment, and will go forward at an early date.

Heavy shipment of the Ideal Machines to foreign countries is becoming so frequent as to be regarded as quite an ordinary occurrence. Shipments have recently been made to Valparaiso, Chili; Panama, Central America; Khartum—Sudan, Egypt; Glasgow, Scotland; Budapest, Hungary; Bucharest, Roumania and elsewhere.

The heavy export requirement for Ideal machines, coming, as it does, to swell the monthly multiplied domestic demand, has necessitated increased factory facilities that rank the Ideal Concrete Machinery Co. among the leading manufacturing concerns of the middle West.

Recent improvements to the Ideal Machine make it universal in its adaptability and really unique among machines for cement block manufacture. An attractive and expensive catalogue has recently been issued that is a valuable guide to the home builder and the block manufacturer alike. It is sent free on application, and the information it contains makes it well worth sending for.

PINANG EXPORTING ELEPHANTS

Many elephants, says the *Pinang Gazette*, are exported from Penang to Rangoon every year. The B. I. S. N. Co.'s *Taroba* is expected to take away eight elephants early next month. This will be an unusually large number for one shipment. The animals are brought overland from Tringganu, Patani, and other Siamese Malay States on the east coast of the Malay Peninsula, to Province Wellesley. In the Siamese Malay States there has been no difficulty about stability of bridges as there are none to cross, but in Province Wellesley, the old bridge over Sungei Jarak at Padang Manorah once partially collapsed, and some difficulty arose as to who should make good the damage.

FAR EASTERN ENGINEERING, CONSTRUCTION, COMMERCIAL AND FINANCIAL NEWS

ELECTRIC RAILWAYS, LIGHTING, POWER, TELEGRAPH LINES, ETC.,

Siam Electric Companies Combine.—The Siam Electricity Co. has taken over the controlling interest in the Siamese Tramway Co.

Osaka-Kobe Electric R.R.—This company has decided to add three million yen to its present capital with a view to extending its system.

Perth City Instals Electric Lights.—Perth, West Australia, has installed a complete electric light system under the direction of the city council.

Tientsin Electric Tramway Extension.—The extension into the Japanese concession at Tientsin was officially opened to traffic on September 18.

New Japanese Wireless.—Wireless telegraphy on a new system recently perfected at the Yokosuka naval arsenal is being tried between Yaidzu, Shizuoka, and Adzumayama, near Yokosuka.

Water Power Electric Generating Plant at Katsuragawa.—This plant of the Tokio Electric Light Co., has been partly installed and is being utilized to supply power and light to the capital.

Dutch Indian Wireless.—The Dutch government has given sanction for the establishment of 38 wireless telegraph stations in the Dutch Indies and this work will be taken up by a private company.

Adelaide Tramways.—There is a row on between the ratepayers and the tramway trust over the proposed route of the new system. The trust has surveyed routes on the residential streets only against which the ratepayers protest.

Geelong Electric Tramways.—The town council of Geelong, Victoria, has accepted the proposals of the Electric *Light and Traction Co. to instal a complete* electric tramway system in that city, says the Australian Hardware and Machinery.

Electric Destructor for Garbage.—The municipality of Balmain, New South Wales, has concluded negotiations for the supply of electric light and power as well as the providing of a garbage destructor with Messrs. Kennick & Co., contractors.

Penang's Cheap Electric Service.—The Penang municipality has made a trade rate for the supply of electricity on a three year contract of 12 cents (Straits dollar) on a day load of five hours daily. The Singapore price is 25 cents with a 25% rebate.

Wallaroo Lighting Service.—The Wallaroo and Moonta Mining & Smelting Co. has entered into a contract with the town council of Wallaroo, South Anstralia, to replace the present two wire service with a three wire service, says the *Australian Hardware & Machinery.*

Steam Turbine Generator.—The municipal electricity bureau at Shanghai is trying out the first steam turbine for the generating of electricity. The turbine speeds 1500 revolutions a minute and develops 1,350 H. P. It was built by Messrs. Parsons & Co. of Newcastle-on-Tyne.

Japanese Cable and Telephone Service.—Tokio and Hokkaido will be connected by telephone within the next few years. According to the official plan, the line connecting Tokio and Sendia willl be completed this year and from Sendai to Aomori early next year. The cable between Hakodate and Aomori was completed in September.

Peking Electric Light and Railway.—The Peking Electric Co. has received a franchise from the board of Home Affairs to construct tramways in the Chinese capital. The capital of one million taels has been subscribed by Chinese. Construction will commence January 1. The doyen of the diplomatic corps has also given his consent to the installation of *electric lights on Legation* street.

Tokio's New Electric Regulation.—An ordinance has been passed in Tokio providing no building may be provided with electricity from more than one power house at one time. The ordinance reads: "In the same house or building it is forbidden to be supplied with electricity from two or more different electricity factories unless special permission is granted by the prefectural governor."

RAILWAYS AND RAILWAY SUPPLIES.

Hangchow Railway.—The Kiangkan-Hushueh Railway was formally opened to general traffic on September 22.

East Indian Railway.—It is the purpose of this company to put five steam rail motors in operation in a short time.

Tokio Central Depot.—The construction of the central railway station in Tokyo will be started within the present fiscal year.

Amur Railroad.—The Russian government has agreed to subscribe 2,500,000 roubles towards the construction of the proposed Amur railroad.

Kirin-Changchun Railway.—The survey of the route of this proposed line was completed last month and the plans are in the hands of experts for approval.

Yunnan Railway Troubles.—Peking has decided that the railways in Yunnan shall be built and operated by Chinese exclusively and the French have filed a protest.

Damage to Japan's Railway by Flood.—It is estimated that the government railways in Japan suffer to the extent in value of two million yen during the recent floods.

Burma Railway Extension.—As the result of the limited appropriation for the work the construction on the Burma railway extensions has been suspended almost in its entirety.

Manchurian Railway as Stevedore.—On October 1st new wharf regulations went into effect at Tairen which provides that all the cargo landed at that port will be handled by the South Manchurian Railway.

Tokio Railway.—Official sanction has not been secured by the Tokio Railway Co. for the carrying of freight on its lines and it has revised its proposed program so as to carry mail matter and parcels only for the present.

Manchurian Railways.—A joint time table and revised tariff went into effect on the South Manchurian and the Chinese Eastern Railways on October 10. This will greatly facilitate passenger and other traffic on the two roads.

Steel Rails for Victoria.—The United States Steel Products Co. has secured the contract for the delivery to the Victoria government of 8485 tons of 80 and 100 pound rails at £6 17s a ton and 518 ton of fish plates at £8 18s 9d a ton.

Redemption of Peking-Hankow Railway.—The ministry of posts and communications at Peking is busy on a scheme to redeem this road. It is understood that the money will be forthcoming from the leading officials and merchants.

Nationalization of Chinese Railways.—The board of communications at Peking has decided to place all the railroads in China under government control and is making enquiries in other countries as to the best methods to accomplish this end.

Pahang Railway.—The construction of the railroad from Gemas in Negri Sembilan to Kuala Semantan in Pahang, which has been authorized, will be commenced at once. It is also reported that a railway will be constructed from Kuala Gemis on the Johore border to Port Dickson.

Foundry for Chinese Railways.—It is reported that Viceroy Chan Chihtung is promoting the establishing of an extensive foundry and iron works at Hankow for the benefit of the Canton-Hankow Hunan and Szechun railways. The capital of the proposed company is placed at 40,000,000 taels.

Manila Railway Co.—The traffic receipts of the Manila Railway for the week ending August 24 were $26,112 (including extensions, 207 miles open), against $24,983 (main line only, 127 miles open) for the corresponding week of 1906; making an aggregate of $1,560,965, against $1,148,923 for last year.

Peking Railway School.—The board of communications at Peking intends to establish a railway school at the Chinese capital for the purpose of training young Chinese for the various provinces. A telephone school has already been established and telegraph, shipping and post schools will soon follow.

Sakai Railway Co.—Official charter was given, under date of September 16, to the Sakai Railway Company, with 1,800,000 yen capital, to construct a railway between Yokohama and Dzushi, a distance of 3 miles 78 chains. This Company is promoted by Mr. M. Suyenobu and eight other persons.

Indian Railways.—A new railway 72.34 miles in length between Rangya on the Bengal state railway and Tezpur in Eastern Bengal has been surveyed. The gauge will be 3 ft. 3⅜ in. The Sambulpur Khurda Railway in Bengal when completed to be 190 miles in length has been surveyed. The guage proposed is 5ft. 6 in.

Tientsin-Chinkiang Railway.—The British Syndicate which has agreed to lend the funds for the construction of the proposed Tientsin Chinkiang Railway has notified the Chinese authorities that the Railway Company will be expected to make an annual repayment of four million taels on account of interest and instalment on the loan.

Electric Rate War at Tokio.—There is keen competition on electric lighting rates between the Tokio Electric Light Co. and the Tokio Railway Co. The former has reduced its rates from 30 sen a kilw. to 20 sen with radical discounts on large orders and announces that it is willing to give a whole night service for 1.40 yen as a substitute service for a half-night at 1.20 yen.

Chinese Railway Concession.—A syndicate of the *gentry of the Provinces of Shensi and Kansuh has asked* the Yu-chuen-pu (Board of Communication) to grant them a railway concession from Taiyuan-fu in Shansi via Pingyang-fu to Hsian-fu in Shensi and then to Lanchou-fu in Kansuh. It is reported that this has been caused by steps, which Viceroy Shen Yun of Shen-Kan is said to have taken to secure a similar concession for a Belgian Syndicate.—*P. &. T. Times.*

Russian Railways.—The Russian Minister of Railways has submitted to the Council of Ministers a scheme or improvements in the state railways which it is proposed to carry out from 1908 to 1912. The total estimated expense is $458,000,000, divided among fine annual budgets. The principal items are doubling tracks, $36,000,000; bridges and embankments, $30,000,000; stations, $59,500,000; workshops, $52,000,000; retailing, $30,000,000, and rolling stock, $151,000,000.

Korean Railways.—The Railway Bureau of the Korean Residency-General on Sept. 20, carried through transportation of passengers and freight to and from Antung, Manchuria. Through tickets are issued between Antung and any point on the Korean railway system, and a ferry boat plies between Antung and New Wiju, connecting with every train leaving or arriving at the latter place. Goods are passed through the Korean Customs at New Wiju by the Railway Bureau, free of charge, which means a saving to shippers of much trouble and annoyance.

Chinese Railways Proposed.—The native gentry and others of Kuanghsi says the P. & T. Times have obtained permission from the Peking government to build railways in their own Province as without any foreign assistance as follows:

(1) a line from Wuchow to Kuei Hsien.

(2) from Kuei Hsien to Nanning, for future extensing to Kuangtung.

The company is to have a capital of Tls. 5,000,000. It is believed that this step of the natives is to check the advance of the French in Kuanghsi.

Fuhkien Railway.—A despatch from Amoy states that the Fuhkien Railway Company has ordered two locomotives for the above named railway. One of them has been ordered through the Mitsui Bussan Kaisha in Amoy. Each is to cost 18,000 dollars.

The railway sleepers and rails were ordered through the Mitsui Bussan Kaisha, and about 40,000 sleepers will be delivered in Amoy in October at $1.15 per piece. The rails were ordered from Hanyang Iron Works through the Mitsui Bussan Kaisha. Tls. 50,000 have been sent to the Hanyang Iron Works in Hankow as a deposit against order.—*Shanghai Times.*

Kobe Belt Line.—The *branch railway line, forming* a connection of the land and marine transport at Kobe was completed last month, and the line opened to traffic. The railway is only a little over two miles long, but it cost more than 1,200,000 *yen.* It branches off from the Tokaido Railway at Nada station, newly established between Sumiyoshi and Sannomiya, and reaches Onohama station through the Onohama suburb of Kobe. Construction required four years for completion, commencing in July, 1903. This railway is the forerunner of the Kobe harbor works, the construction of which will shortly be commenced.

The Shunteh-fu-Chinan-fu Railway Project.—The proposed railway line from Shunteh-fu, Chihli, to Chinan-fu, Shantung, has been prospected by Taotai Chu Nian-tien, in company with a railway expert, the work being carried out under instruction from H. E. Yuan Shih-kai, the Viceroy of Chihli.

It is reported that the work of prospecting for this railway has been completed. It will be 480 li in length, only 140 of which will be within the borders of Chihli. The cost of building it will be about five million taels Reports, plans and specifications relating to the project have been sent to the Board of Posts and Communications by H. E. the Viceroy Yuan Shih-kai.—*Shanghai Times.*

Proposed Railways in Tasmania.—The construction of a line between Burnie and Flowerdale is not considered advisable by the commissioners to whom Parliament referred the question, says the *Australian Hardware and Machinery.* The small population to be served and competition from sea carriage are the principal reasons assigned for the adverse report. Another proposed railway between Scottsdale and Branxholm is favoured by the commissioners. This line, which is 25 miles in length and of the usual 3-ft. 6.-in gauge, is estimated to cost £154,000. A bill is now before Parliament authorising the Tasmanian Investment and Trust Co. Ltd. to put down and run a line from the Derwent Valley railway to the western mining fields of Tasmania. The measure is entitled "the Great Western Railway and Electric Power Act," but either steam engines, electric motors, or other motive power may be employed. The distance to be covered is not stated, but the time to be occupied in construction limited to seven years from January 1, 1908.

PUBLIC AND PORT WORKS, DOCKS, WHARVES, ETC.

Kobe Harbor Improvements.—The ceremony inaugurating the construction of the Kobe Harbor Works took place September 16.

Kuantan Harbor Improvement.—The dredger from the Tanjong Pagar has been at work for about three months at Kuala Kuantan preparing the way for the government engineers to prepare definite plans and estimates for the new harbor contemplated.

Kyoto Public Improvements.—The municipality of Kyoto is experiencing some difficulty in floating the six per cent. loan of nine million yen repayable in 30 years for the purpose of constructing electric railways, waterworks and sewer systems. It is not believed that the bonds are sufficiently attractive to interest the banks at that rate of interest.

Pasig River Wall Construction.—Plans are being prepared for the construction of the balance of the river wall east of the bridge of Spain in Manila. The government has expended over half a million pesos on that part of the river lying between the bridge of Spain and the river's mouth. The Atlantic Gulf & Pacific Co. are the contractors for the principal part of the work. All the filling will be completed as soon as the sewer system is installed.

Kofu Water Works.—It has been decided by the municipal authorities of Kofu City to expend 700,000 yen in the construction of a modern system of water works for that city, taking the supply from the Arakawa river.

Canton Cement Factory.—The contract for the construction of the Canton Government Cement Factory at Canton was let recently to Messrs. Howarth Esrkine & Co. This contract covers the construction of the foundations and buildings and the price named in the contract is $100,000.

Nanking Waterworks.—Permission has been given by the Board of Agriculture, Works and Commerce to Taotai Li of Kiangsu to organize a company with a capital of Tls. 400,000 for the purpose of giving the city of Nanking an up-to-date water system. The promoter agrees to subscribe half the amount required and the balance of the stock will be taken by Chinese merchants in the cities of Hongkong and Singapore.

Star Ferry Wharf.—This valuable construction at Kowloon is now complete. The builders were the Hongkong & Whampoa Dock Co. and Messrs. Leigh & Orange, the architects. The new construction takes the place of the old wharf which was destroyed by the typhoon. The new wharf is built along the sea wall instead of jutting out into the sea. It is built of wood and stands on steel piles making a substantial wharf sufficiently strong to resist the most formidable typhoon.

Extension of the Gas Works at Dunedin, New Zealand.—Tenders aggregating £31,443 have been accepted. The gas-holder is to be supplied by Weston & Wright's Gas-holder and Engineering Works at a cost of £10,830, while the stoking machinery and plant for handling the coal are to be furnished by W. J. Jenkins & Co., the cost being £7255. The same firm receive a contract at £4228 for a stage floor and other structural material. Reese & Budd are to furnish the firebrick goods and retorts at £4890, and Watson, Rhodes & Son are to put in the foundations for £4240.

Barren Jack Water Works, N.S.W.—Since the strike, work at Barren Jack has been going on apace. A great diversion weir has been completed, into which the Murrumbidgee River will be turned. At Powerhouse Gully 1½ acres of solid rock have been excavated to admit of the erection of the electrical generating plant to work the great Ledgerwood cableways (each capable of lifting loads of 15 tons) for swinging the material down on to the site of the dam. In order to convey with all despatch the material required for the construction of the dam, a railway is being built from Mahkoolma down Carroll's Creek, which, while keeping above the future water-level, reaches the dam at the level of the works. The line is some 28 miles long, having a 2-ft. gauge, with curves as sharp as a 99-ft. radius, and reaches Goondah siding at the 202-mile peg on the main southern line, where heavy gantries are being erected capable of lifting the heaviest pieces of machinery required at Barren Jack from the main trunk railway on to the 2-ft. gauge line. The rails for the line have been ordered from America. The locomotives to be used are of the type known as "Krauss," which can be worked either singly or coupled in pairs, and are being imported from Europe. To give an idea of the amount of traffic that will have to pass over this line during the construction of the dam, it may be mentioned that 48,000 tons of cement will be required, apart from the machinery and other material. The dam itself is to be built of red granite in blocks of 10 and 15 tons bedded in concrete. The total height from foundation to crest will be about 240 ft; 20 ft. thick at the top, broadening out at the bottom to 200 ft. and the reservoir when full will contain at a round computation nearly one and a-half times as much water as there is in Sydney Harbour.—*Aust. Hardware.*

SHIPBUILDING, GENERAL MARINE, FISHERIES, ETC

German Steamers for Szechuan.—Germany is reported to have ordered seven shallow draft steamers for use on the Yangtse and Min rivers.

To Dynamite Sharks.—An American marine engineer has succeeded in destroying sharks successfully by means of dynamite bombs concealed in lumps of meat.

Dockyard at Seoul.—Japanese capital is interested in the proposed scheme to construct a large dockyard on Roze island, which lies just outside Chemulpo harbor

Dredgers for Shanghai.—Two huge Dutch dredgers towed by two tugs are on their way to Shanghai. An accident at Suez to one of the tugs caused a delay at Suez.

Swedish Oriental Steamship Line.—This company which was but recently organized, inaugurated its service to Japan at Gottenburg on August 20 when the first steamer started for Japan.

Shell Fish Destroyed.—The mud formed in Yokohama waters as a result of the heavy floods in Japan has resulted in the destruction of all the shell fish. The loss is estimated at yen 60,000.

Philippine Shipping.—The suspension of tonnage dues at Philippine ports has resulted in the attraction of all the principal lines and has greatly increased the number of vessels calling at Manila.

Japanese Docks and Shipyard in China.—Advices from Hankow announce the purchase of 40,000 fong of land in Hanchiaokou by Japanese capitalists as a site for extensive docks and shipyards.

River Pearling in Kamchatka.—A Russian is reported to have discovered shells containing a milk-colored dull pearl at the mouth of a tributary river about 250 versts from the sea coast of Kamchatka.

O. S. K.'s Calcutta Service.—The steamer Yerimo Maru of the Osaka Shosen Kaisha sailed from Japan with a cargo of matches, etc., for Calcutta on September 6th, inaugurating the Kobe-Calcutta Service of this company.

Toyo Kisen Kaisha Discontinues South American Service.—It has been announced that a loss of 70,000 yen has been sustained by the company since the opening of this service and it was decided last month to abandon it.

Fusan Shipping Co.—The businessmen of Fusan are promoting a shipping company called the Kankoku Engan Yusen Kaisha for the purpose of inaugurating a regular steamship service among the fishing stations on the Korean coast.

Dredges Four Hundred Tons an Hour.—The dredger constructed by the Osaka Iron Works for the Sasebo Naval Dockyard was tried out in the harbor September 6, exceeding all expectations. The dredge is 154 feet in length, 31 feet wide and 12 feet deep.

Nikolajetak Fisheries.—There are two extensive fisheries established at the post of Nikolajetak on the coast of Siberia, both equipped with modern refrigerating plants. Recently, several cargoes have been shipped by steamer to supply the European market.

Netherlands Patrol Boat.—Messrs. Riley, Hargreaves & Co. of Singapore are constructing a patrol boat of the stern wheel type to draw about two feet of water and for use on shallow rivers, for the Netherlands India Government which will be completed shortly.

New Steamer for the C. P. R.—A new steamer to be known as the Empress of Britain and which will be faster than the Empress of China or the Empress of Japan has been ordered by the Canadian Pacific Railway. She will be placed on the service between England, Japan and China.

Revenue Cutter for Siam.—The Siamese government has placed an order through Mr. J. M. Dunlop of Bangkok with the well known firm of Thorneycroft & Co. of Chiswick. The vessel will cost about £16,000 and will be used as a patrol boat in the gulf of Siam to protect the coast from smugglers.

Chosen Yusen Kaisha.—A company has been formed at Fusen, Korea by a number of Japanese residents with a capital of a million yen for the purpose of providing water carriage for the ports along the southern coast of the peninsula. The company will ask the Korean government for a subsidy of 25,000 yen annually.

Fishing Village at Port Arthur.—The Japanese government intends to construct a model fishing village at Liafu near Port Arthur the buildings in which shall be rented free to Japanese fishermen and after a certain number of years the successful fishermen will be given titles to the homes. The sum of 5,000 yen will be spent in this project annually.

N.Y.K.S Big Ships.—The two steamers of 8,500 tons each now under construction for this company at the Kawasaki Yard at Kobe when completed will be placed on the company's European run. It is also reported that the company will order ten additional steamers of the same type from the Kawasaki and Mitsu Bishi yards in the near future.

Tsuruga-Vladivostock S. S. Service.—There is keen competition on rates between the Russian Volunteer Fleet and the Osaka Shoaen Kaisha between these two points. The Russians have added a number of weekly service vessels and have reduced rates much lower than the Japanese line. It is understood that the Osaka Shosen Kaisha will meet all cuts.

Deep Sea Fishing Co.—A company has been formed in the Bonin islands for the purpose of shark fishing in the South Sea and sealing in the North Pacific. The governor of the islands has presented a fishing boat to the company as a local subsidy and an effort is being made to induce the Tokio government to grant a substantial annual subsidy to the company.

Largest Japanese Built Steamer Launched.—The Tenyo Maru, a steamer of 18,000 tons, was launched from the Mitsu Bishi Dockyard at Nagasaki on September 14th and is the largest vessel built in Japan. She was constructed for the Toyo Kisen Kaisha and two sister ships have been ordered by the company from the same yard.

Japanese Whaling Industry.—A curing company in connection with the whaling industry of Japan has been organized with a capital of one million yen. It will establish four stations in Japan and one in Korea. It was decided recently that for the present there would be no close season for the whalers as was proposed some time ago owing to the setback it would prove to the industry at this time when it is practically in its infancy.

Mort's Dock and Engineering Co. Ltd., of Sydney, have in hand to the order of the Port Jackson Cooperative S.S. Co. a large steamer for the Manly ferry traffic. This vessel, built of steel, will be capable of carrying 1400 passengers at a speed of 14 knots an hour. Her engines are to be triple expansion, 1150 h.p., with cylinders 17½, 20½, and 45 in. in diameter, having a stroke of 27 in. There will be two steel boilers with a working pressure of 160 lb.

German Activity.—A new steamship line, to comprise at least eight freight ships and owned by the Jebsen interests of Hamburg, will invade the Oriental field in the near future from Seattle, according to Captain Hans Jebsen of the *Tolosan*, a cousin of M. Jebsen, of Hamburg. Captain Jebsen will have the local management of the vessels, of which the *Tolosan*, in port at Seattle last month, will make the maiden voyage. The ships will be the *Tolosan*, *Baker*, *Brandford*, *Elsa*, *Emma*, *Erica*, *Erna* and *Eva*.

Shipping Facilities at Newcastle.—The Premier of New South Wales (Hon. J. H. Carruthers) has promised that the new wharves, 1200 ft. long, at Newcastle shall be completed within 12 months. New dolphins are to be put down for the mooring of vessels, and the water in the harbour and on the bar is to be deepened. In this connection it is interesting to learn that an English company has been inquiring as to the depth of water at Newcastle, with a view to running a line of vessels to and from the port. To facilitate the loading of coal at the port, the Railway Commissioners are having costly railway works constructed, and four dumping machines are to be erected on the wharves.—*Australian Hardware and Machinery.*

The Gyroscope as Ship's Compass.—According to the *Chicago Tribune*, Dr. H. Anschutz-Kampfe has invented a new form of steering standard, dependent for its operation on the principle of the gyroscope, which is driven electrically and carries an indicating needle pivoted within an arc similar to that of the ordinary compass. It does not, of course, necessarily point north and south, but it tends continually to point in any direction in which it may be set, and as it is wholly unaffected by magnetic influences it would prove valuable in warships, which contain such huge masses of iron and steel in guns and equipment. It is not proposed to displace the mariner's compass, but to employ this instrument as an adjunct.

MINES, MINERALS AND THE METAL TRADE

Japan Copper Foundry.—An effort is being made to interest British capital in the establishment of a large copper foundry in Japan.

Pahang's Gold Output.—For the seven months ending July 31, 6257 oz. compared with an output of 10,089 oz. for the same period last year.

Anhwei Copper Mines.—Operations have begun in the development of the mines at Tungkuan Shan in Anhwei under the direction of a foreign mining engineer.

French Coal Concession in Yunnan.—In addition to the concession of iron mines in Yunnan the French government claims the right to a coal concession in the same district.

Kerosene Geyser in Japan.—The Japan Kerosene Oil Co. is having the benefit of a remarkable gusher the outburst of which occurred on the company's property at Gochi recently.

Perak Syndicate.—This organization has been registered in London with a capital of £5,000. It has for its purpose the acquiring and development of mines in Perak and elsewhere in Asia.

Mining in Formosa,—Coal, copper and gold are taken out in quantity in the Keelung district of Formosa. The coal is said to be of good quality and about 100,000 tons are taken out annually. Little development work has been done but the prospect is bright for the future of mining in the island.

The Fusan Coal Mines.—The Fushan coal mines are doing a flourishing business and the coal is said to be as good as Kaiping. They are supplying all the coal used by the South Manchurian Railway as well as other manufacturing interests.

Saghalien Mineral Development.—The governor of Saghalien is reported to be on his way to St. Petersburg with plans for the development of the extensive mineral wealth of the island. He expects to receive support from the imperial government.

Mongolia's Mineral Wealth.—The imperial agent at Kulun has called attention to the rich deposits of mineral wealth in Mongolia and urges the government to encourage foreigners in its development owing to the scarcity of Chinese capital available at this time. Russian capital is anxious to gain a foothold.

Gold Strike in Siberia.—The manager for the North-East Siberia Co. reports that a rich placer field has been developed by prospectors at Anadyr Bay, Siberia. According to the report, the dirt runs from $1.00 to $5.00 a pan. One of the directors left Seattle for the scene of the rich find in July and his report is awaited with interest.

Hanyang Iron Works.—A dispatch from Hankow announces that the Hanyang Iron Works are flooded with orders for steel rails from every section of China and it has become necessary to install two new modern furnaces to handle the work. An electric light plant has been installed throughout the works so that operations may be carried on night and day.

Bonus for Copper.—The Government of New Zealand is offering a bonus of £2000 for the production of good marketable copper from ores mined and smelted in the colony. The terms are:—For the first 1000 tons, to be produced by June 30, 1909, £1000; the second 1000 tons, to be produced by June 30, 1910, £500; and the third, 1000 tons to be produced within a year later, £500. The bonus is to be divided in the event of two or more companies being equally entitled to it.

Port Kembla Smelting Works.—Work is progressing rapidly on the smelting works at Port Kembla, New South Wales. The foundations are under way while the 200 foot chimney is completed to a height of 80 feet. The Electrolytic Copper Refinery Co. is arranging to construct its works alongside the smelter as soon as the materials arrive. The magnitude of these works says the *Australian Hardware and Machinery* journal may be gathered from the exetnt of the foundations.

Bonus for Quicksilver.—A bonus of 4d. per lb. is again offered by the New Zealand Government for the production of the first 100,000 lb. of good marketable, retorted quicksivler, free from impurities. One-third of the total quantity is to be produced by March 31, 1910, and the remaining two-thirds by March 31, 1911. No bonus will be paid till the whole has been produced, and in the event of more than one company qualifying for the bonus, it will be divided between them.

Kerosene in Japan and Formosa.—The output of kerosene from Nippon during the last year reached 1,300,000 koku and is steadily increasing. At the present time in addition to the local product 1,640,000 koku is imported. Most of the best quality supplied is the yield from the vicinity of Hokkaido where the deposits of oil are said to be inexhaustive. Reports from Formosa also indicate that the development of the oil wells of that region will be found among the most important industries. So far as is known the kerosene field in Korea and Manchuria is not promising.

Coal for Vladivostok.—The demand for coal is increasing at Vladivostok, especially for supplying increased consumption of the railways since the Siberian forests are becoming exhausted. The principal sources of supply at the present time are Otaru, Moji, Karatsu, Muroran, etc., besides England, Harbin, Shangtang (China), etc., the supply being in some minor quantity. Total of coal imported into Vladivostok amounts to about 30,000 tons. Quotations are, 1st class Kiushu coal from 12 roubles to 13 roubles per ton, and 2nd class 11 roubles; 1st class Hokkaido coal 14.50 roubles and 2nd class 12.50 roubles; Chinese coal 1st class 12.50 roubles; Alexander coal 2nd class 11.50 roubles.

Manchurian Mines.—The entire working authority of the mines along and near the Antung and Mukden-Chanchun Railway lines (including those already put in working order as well as those which remain untouched) shall be in future placed in the hands of the Nisshin Kozan Kaisha (the Japan-China Mining Company) which will be shortly inaugurated at Mukden with an equal joint capital of Japan and China. In case either of the contracting parties should have no intention of participating in the mining works, the other party shall be invested with the free management of the mining works. If the Chinese Government should form any contract with foreigners concerning new mining works in other territories, the company shall be guided by the principle of equal interest and gain.

Smelting Works.—The works of the Melbourne and Great Northern Smelting Co., at Newcastle, N. S. W., are now in operation. One furnace is dealing with over 100 tons of copper ore per week, and so soon as suitable bricks can be obtained from England, the second furnace will be completed. It is the intention of the company to erect altogether six furnaces. Blister copper is now being produced, and it will be despatched to England. Close to the company's works another company, known as the Federal Smelting and Refining Works, have erected a furnace for the smelting of antimony ore. It is a powerful furnace, and the company hope to be able to turn out 5 or 6 tons of star metal per week. The furnace will be in operation during August. As soon as a start is made other furnaces will be erected on land adjoining the Melbourne and Great Northern Co.'s works.—*Australian Hardware and Machinery.*

Steel Pipe Manufacture in New Zealand.—"Progress" for June has an illustrated article dealing with the works and products of the Spiral Steel Pipe Co. of New Zealand Ltd. The company have the right of manufacture in that colony of the spiral riveted steel pipes patented in Australasia and elsewhere by Mr. Mephan Ferguson, of Melbourne. Wanganui, in the Wellington province, is the site of these works, the three machines which they contain being capable of producing 1050 ft. of pipes in a day or 350 ft. each. After leaving the machine every pipe is tested by hydraulic pressure, then covered with hessian and, plunged into a tank containing a mixture of Trinidad bitumen and coal tar kept at a temperature of 400 deg. F. Twenty minutes in the bubbling compound thoroughly permeates the hessian and gives the pipe a coating which is proof against dirt and corrosion. Only spiral pipes are made at Wanganui, but at New Lynn, in the Auckland province, locking bar pipes on the Ferguson patent are being made by the Mephan Ferguson Patent Locking Bar Steel Pipe Co. of New Zealand Ltd. Though run independently, the two concerns are practically controlled by the one body, Mr. A. Hatrick being chairman of directors of both companies.

FINANCIAL AND MISCELLANEOUS

Japanese Insurance Losses.—The insurance companies of Japan were hit to the tune of four million yen as the result of the disastrous fire at Hakodate.

Short Crop of Silk.—As the result of the recent floods in Japan the Autumn silk crop will not be more than one-half what it was last year. However, as the fall crop is never greater than a small fraction of the spring returns the annual yield will not be seriously affected.

Japan Captures Trade.—According to the latest returns, the import of Japanese goods to Vladivostok is worth seven million roubles against 2,200,000 roubles in 1903, while the corresponding figures for Russian xports to Japan are 223,000 roubles in 1906 and 8,200,000 roubles in 1903.

The Japanese Sugar Refining Co.—This strong organization recently incorporated by the amalgamation of several minor concerns has just issued debentures to the amount of three million yen, They have been taken up by the banks of Tokio and Osaka at 98. They pay 7% and are made redeemakle in three years.

Canadian Lumber for Manchurian Railway.—A Nagasaki dispatch states that the Pacific Lumber Company, of Canada, and the Lumber Company, of Vancouver, have received orders for the supply of 5,000,000 feet of timber for the South Manchuria Railway. It is stated that the timber ordered will be sufficient to build 1,000 passenger cars.

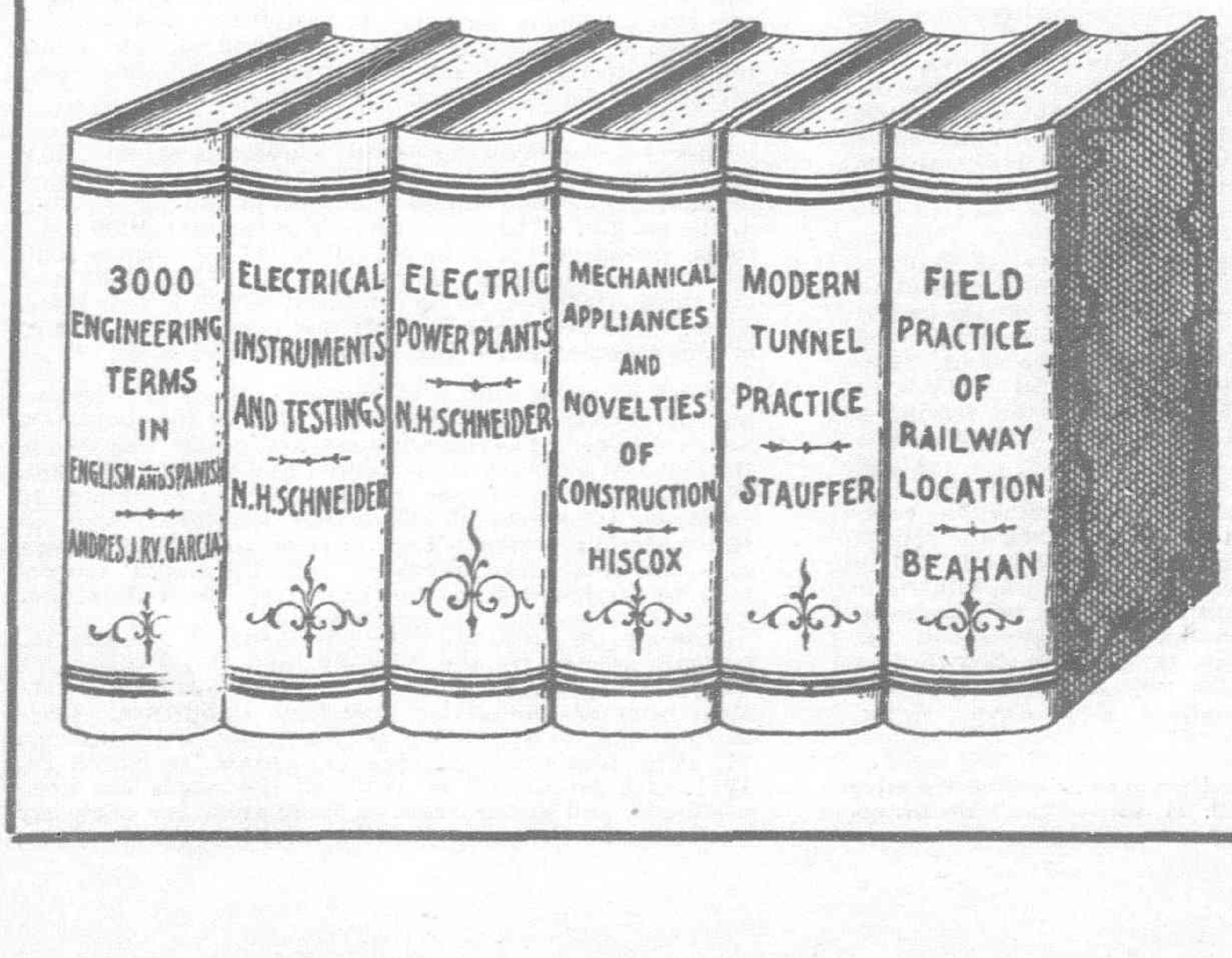
HEMP STATISTICS, 1st OCTOBER, 1907

(Courtesy of C. S. Nicholson, *Secretary Manila Chamber of Commerce.)*

Arrivals of hemp at Manila up 30th September........................		565,248 *Bales.*
Arrivals of hemp at Cebu up 30th September........................		149,045 *Bales.*
Arrivals of hemp at all Ports up 30th September....................		714,293 *Bales.*
Stocks on hand in Manila and Cebu on 1st January..............		63,432 *Bales.*
TOTAL...		777,725 *Bales.*
Export to all parts to date 30-9-07..	658,846 *Bales.*	
Local consumption estimated at..	6,479 "	665,325 *Bales.*
Total stocks at Manila and Cebu on 1st October, 1907		112,400 *Bales.*

EXPORT OF HEMP, AUGUST, 1907.

Date	*Vessel*	*London*	*L'pool*	*Atlantic U. S.*	*Pacific East & California*	*Australia*	*Other pts.*	*Total Bales*
	F'wd:—	191,399	64,857	244,016	28,450	8,435	50,588	587,745
Sept. 1	Sungkiang.........Cebu	440	320				13	773
" "	Yuensang..................	2,904	200				500	3,604
" 2	Isla de Luzon...........	249	1,650				40	1,939
" 5	Polyphemus	3,500	869				250	4,619
" "	Taming	2,928	400				1,052	4,380
" "	Tremont....................	550	350		7,154			8,054
" 8	Loongsang................	1,180	250				425	1,855
" 9	Kumano Maru					1,548		1,548
" 10	Tsinan					300		300
" 13	Zafiro	1,000					100	1,100
" 15	Prinz Sigismund					134		134
" 16	Franklin						300	300
" 17	Taming.....................	89					250	339
" 20	Manila						50	50
" "	Satsuma....................			11,132				11,132
" "	Loongsang................	1,261	425				683	2,369
" "	Den of Kelly			9,390				9,390
" "	Kaifong ....Cebu						89	89
" 24	Empire						100	100
" "	Tean	2,010	25					2,035
" 27	Yuensang..................	1,620	1,600				500	3.720
" "	Nikko Maru..............						350	350
" "	Zafiro	1,000	2,600				1,008	4,608
" 28	Socotra ....Cebu	400	1,400					1,800
" "	Den of Kelly ....do			5,563				5.563
" 29	Sambia......................						950	950
	TOTAL............	210,530	74,946	270,101	35,604	10,417	57,248	658,846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FAR EASTERN STOCKS AND QUOTATIONS

Courtesy of Messrs. Kadoorie & Co., Hongkong, for October, 1907.

STOCK.	WHEN ESTABLISHED	CAPITAL	NO. OF SHARES	VALUE	PAID UP	RESERVE	WORKING ACCOUNT	DATE	LAST DIVIDEND.	Approximate Yield per cent. per annum at Present Quotation.*	CLOSING QUOTATIONS.
BANKS.											
Hongkong & Shanghai Banking Corporation do do (new)	1865 1907	$15,000,000	80,000 40,000	$125 $125	$125 $125	*g* £1,000,000 *s* $11,750,000 *i* $250,000	$1,797,167	30-6-07	£1.15|- for half year ending 30.6.07 @ ex 2|2⅛=$16 04 per share	5	$647½ $640 new issue £78
National Bank of China, Ld.	1891	£699,475	10) 99,925	£7	£6	*c* £12,735 $300,000	$71,293	31-12-06	$2 (London 3|6) for 1903	...	$51
Russo Chinese Bank	18	Rbs. 15,000,000 Tls. 2,000,000	80,000 16,000	Rbs. 187½ Tls. 125	Rbs. 187½ Tls. 125	*g* Rbs7,130,500 *s* Rbs2.000,000 *s* Tls 800,000	Rbs41,	31-12-06	9 per cent		Tls. 175
MARINE INSURANCES.											
Canton Insurance Office, Ld.	1881	$2,500,000	10,000	$250	$50	$1,675,000 *j* $200,000	$233,638	31-12-05	$20 for 1905	7½	$270
North China Insurance Co., Ld.	1863	£150,000	10,000	£15	£5	*g* £110,000 *s* Tls. 100,000 *f* Tls. 50,000	Tls. 185,529	30-6-06	Interim of 7|6, for account 1906 at ex. 2-10-11-16 per tael	6	Tls. 75 buyers
Union Ins. Society of Canton, Ld.	1867	$3,100,000	12,400	$250	$100	*s* $3,000,000 *g* £70,000 *f* $456,407 *j* £125,137.15 *u* $817,628	$1,460,490	31-12-06	Final of $12 making $42 for 1905, and interim of $30 for account 1906	5½	$760
Yangtsze Ins. Association, Ld.	1862	$800,000	8,000	$100	$60	$850,000 *j* $136,287 *f* $ 15,527	$461,476	31-12-06	$12 for year ending 31. 12. 05	7	$170 sellers
FIRE INSURANCES.											
China Fire Ins. Co., Ld.	1870	$2,000,000	20.000	$100	$20	$1,000,000 *x* $320,449 *f* $7,616	$362,980	31-12-06	$6 and bonus $2 for 1905	9¼	$86 sales
Hongkong Fire Ins. Co., Ld.	1868	$2,000,000	8,000	$250	$50	$1,256,483	$435,236	31-12-06	$40 for 1905	13¼	$300 buyers
SHIPPING.											
China & Manila Steamship Co., Ld	1882	$750,000	1) 30,000	$25	$25	$7,000	$365	31-12-06	$1 for 1906	6¾	$15 buyers
Douglas Steamship Co., Ld.	1883	$1,000,000	20,000	$50	$50	$264,638 *i* $96,988	Nil.	30-6-07	$4 for year ended 30-6-07	10½	$37½ ex div.
Hongkong, Canton & Macao Steamboat Co., Ld.	1865	$1,200,000	80,000	$15	$15	*e* $250,000 *d. i.* $550,000 *f* $ 86,989	$27,101	30-6-07	$1 for 1st half year ending 30-6-1907	7¼	$27½
Indo-China Steam Navigation Co., Ld. (Preferred) Do. Do. (Deferred)	1882	*m* £600,000	2) 60,000 2) 60,000	£5	£5	£60,000 *i* £270,000	£3,694	31-12-06	5|- @ ex. 2-2¾=$2.24 per share for 1906	3¼	$41 $29
Shanghai Tug & Lighter Co., Ld. Do. Preference	1903	Tls. 1,500,000	20,000 10,000	Tls. 50	Tls. 50	Tls. 54,372	Tls. 13,327	31-12-06	Interim of Tls. 1¾ for a|c 1907	11½ 10½	Tls. 47sellers Tls. 48½ buyers
"Shell" Transport & Trading Co., Ld.	1898	£ 2,000,000	2,000,000	£1	£1	£400,000 *i* £1,871	£172,370	31-12-06	Interim of 1|- (Conpon No. 8) for a|c 1907	4½	44|-
"Star" Ferry Co., Ld.	1898 1900	$200,000	10,000 10,000	$10 $10	$10 $5	$65,000 *i* $32,957	$137	30-4-07	$1.00 50 cts. for year ended 30-4-07	4¾ 5	$21 sales $10 buyers
Taku Tug & Lighter Co., Ld.	....	Tls. 1,500,000	12) 30,000	Tls. 50	Tls. 50	Tls. 98,000 *d* Tls. 419,479 *e* Tls. 62,000 *i* Tls. 81,200 *q* Tls. 30,000	Tls. 18,730	31-12-06	Final of Tls. 2 making Tls. 6 for 1906	12½	Tls. 48 sales
REFINERIES.											
China Sugar Refining Co., Ld.	1878	$2,000,000	20,000	$100	$100	*o* $345,741 *e* $450,000 *r* $ 56,848	$9,218	31-12-06	$8 for year ending 31-12-06	8¼	$98
Luzon Sugar Refining Co., Ld.	1882	$700,000	7,000	$100	$100	none	*Dr.* $138,523	31-12-06	$3 for 1897	...	$21
Perak Sugar Cultivation Co., Ld.	...	Tls. 350,000	7,000	Tls. 50	Tls. 50	Tls. 100,000	Tls. 8,935	31-8-06	Tls. 4. (8%) for year ending 31-8-06	4½	Tls. 87½ sales
MINING.											
Chinese Engineering & Mining Co., Ld.	1901	£1,000,000	1,000,000	£1	£1	*d* £110,000 *h* £12,289	£12,546	28-2-06	Interim of 1|6 for account year ending 28-2-07	4	Tls. 15½ sellers
Raub Australian Gold Mining Co., Ld	1892	£200,000	150,000 50,000	£1 £1	18-10 £1	£4,873	*Dr.* £11,358	31-3-07	No. 12 of 1|-=48 cents	...	$8½ buyers
DOCKS, WHARVES AND GODOWNS.											
Fenwick (Geo.), & Co., Ld.	1889	$450,000	*z* 18,000	$25	$25	$64,124	$10,335	31-12-06	$1¾ for year ending 31-12-06	10¼	$17
Hongkong & Kowloon Wharf & Godown Co., Ld.	1886	$2,000,000	40,000	$50	$50	$550,000 *t* $23,152 *i* $30,000	$3,047	31-12-06	Interim of $2 for six months ending June 30th 1907	6	$67½
Hongkong & Whampoa Dock Co., Ld.	1866	$2,500.000	50,000	$50	$50	*v* $50,000 $100,000	$491,580	30-6-07	$4 for half year ending June 30th 1907	8	$100 buyers
Shanghai Dock & Engin'g Co., Ld.	1906	Tls. 5,570,000	13) 55,700	Tls. 100	Tls. 100	Tls. 1,000,000	Tls. 10,459	30-4-07	Tls. 3 for year ending 30th 1907	4	Tls. 77 sales
Shanghai & Hongkew Wharf Co., Ld.	1902	Tls. 3,600,000	14) 36,000	Tls. 100	Tls. 100	*b* Tls. 487,210 *r* Tls. 100,000 *p* Tls. 190,100 *e* Tls. 75,000	Tls. 23,117	31-12-06	Interim of Tls. 8 for a|c 1907	8½	Tls. 217½ sellers
LANDS, HOTELS AND BUILDINGS											
Anglo-French Land Investment Co., Ld.	1906	Tls. 2,500,000	3) 25,000	Tls. 100	Tls. 100	Tls. 15,000	Tls. 3,388	28-2-07	Tls. 6 for 14½ months ending 28-2-07	6	Tls. 103
Astor House Hotel Co., Ld.	1901	$750,000	4) 30,000	$25	$25	$30,000	$10,908	30-6-07	$2¼ for year ending 30-6-07	9¾	$23 sellers
Astor House Hotel, Ld. (Tientsin)	....	Tls. 100,000	2,000	Tls. 50	Tls. 50	Tls. 35,000 *e* Tls. 10,000	Tls. 1,013	28-2-06	Final of Tls. 6½ making Tls. 11½ for year ending 28-2-06.	8¼	Tls. 140 buyers
Central Stores, Ld.	....	$751,845	16) 50,123	$15	$15	*n.* $1,000	$9.178	31-12-06	$1.80 for 1906	13	$14
Hongkong Hotel Co., Ld.	1866	$600.000	12 000	$50	$50	$648,975 *r* $36,075	$10,925	31-6-07	$4 for 1st half-year ending 30-6-1907	10	$100 buyers
Hongkong Land Investment & Agency Co., Ld.	1889	$5.000,000	50,000	$100	$100	*e* $250,000	$56,218	31-12-06	Interim of $3½ for half year ending 30-6-07	7¼	$96 sales
Humphrey's Estate & Finance Co., Ld.	1887	$1,500,000	150,000	$10	$10	*i* $208,386 *e* $50,000	$11,567	31-12-06	80 cents for 1906	7¾	$10½

FAR EASTERN STOCKS AND QUOTATIONS—(CONTINUED.)

STOCKS	WHEN ESTABLISHED	CAPITAL	NO. OF SHARES	VALUE	PAID UP	RESERVE	WORKING ACCOUNT	DATE	LAST DIVIDEND	Approximate Yield per cent. per annum at Present Quotation.*	CLOSING QUOTATIONS
Kowloon Land & Bldg. Co., Ld.	1889	$300,000	6,000	$50	$30	none	$1089	31-12-06	$2½ for 1906	7	$36
Shanghai Land Investment Co., Ld.	1888	Tls. 3 900,000	78.000	Tls. 50	Tls. 50	Tls 869,493 *e* Tls. 170,000	Tls. 61,978	31-12-06	Interim div. of Tls. 3 per share for % 1907	7½	Tls. 101 buyers
Tientsin Land Investment Co., Ld.	1902	Tls. 772,600	7,726	Tls. 100	Tls. 100	*i* Tls. 71,685	Tls. 1,973	31-12-06	Final of Tls. 5 making Tls. 8 for 1906	----	Tls. 100 buyers
West Point Bldg. Co., Ld.	1889	$625,000	12,500	$50	$50	none	$1,519	31-12-06	Interim of $2 for six months June 30th 1907	8½	$48
COTTON MILLS.											
Ewo Cotton Spinning & Weaving Co., Ld.	1895	Tls. 1,000,000	5) 20,000	Tls. 50	Tls. 50	Tls. 150,000 Tls. 45,939	Tls. 64,986	31-10-06	Tls. 10 for year ended 31-10-06	16	Tls. 62 sellers
Hongkong Cotton Spinning, Weaving & Dyeing Co., Ld.	1901	$1,250,000	125,000	$10	$10	*e* $60,000	$14,269	31-7-06	50 cents for year ending 31-7-06	4¾	$10½
International Cotton Manufacturing Co., Ld.	1895	Tls. 750,000	6) 10,000	Tls. 75	Tls. 75	Tls. 150,000	Tls. 36,211	30-9-06	Tls. 6 for year end. 30-9-06 (8%)	11½	Tls. 53
Laou-kung-mow Cotton Spinning & Weaving Co., Ld.	1895	Tls. 800,000	7) 8,000	Tls. 100	Tls. 100	none	Tls. 31,469	31-12-06	Tls. 8 for 1906	8¾	Tls. 90 sellers
Soy Chee Cotton Spinning Co., Ld	1895	Tls. 1,000,000	2,000	Tls. 500	Tls. 500	*l* Tls. 28,257	Tls. 50,663	31-12-06	Tls. 50 for 1906	17¼	Tls. 287½ sales
MISCELLANEOUS.											
Bell's Asbestos Eastern Agency, Ld.	1895	£5,377.10s	11) 8,604	12-6	12-6	£1,299	£638	31-12-06	1s. 3d. for 1906	9	$ 6½
Campbell, Moore & Co., Ld.	1886	$12,000	1,200	$10	$10	$9,000	$653	31-12-06	$3 for 1905	....	$20 sellers
China-Borneo Co., Ld.	1903	$720,000	8) 60,000	$12	$12	none	Nil.	31-12-06	$1 for 1904	....	$9¾ buyers
China Flour Mill Co., Ld.	....	Tls. 200,000	4,000	Tls. 50	Tls. 50	Tls. 50,000	Tls. 889	31-12-05	Final of Tls. 5 making Tls. 10 for 1905	....	Tls. 55 sellers
China Light & Power Co., Ld. Do. do. Special Shares	1901 1907	$550,000	50,000 17) 50,000	$10 $1	$10 $1	none	$25,000	28-2-07	60 cents for year ending 28-2-06	....	$6 sales & buyers
China Provident Loan & Mortgage Co., Ld.	1898	*a* $1,000,000	100,000	$10	$10	$115,000	$855	31-12-06	80 cents for 1906	9	$9
Dairy Farm Co., Ld.	1896	$187,500	25,000	$7½	$6	$50,000	$2,555	31-7-06	$1.30 for year ending 31-7-06	7¼	$18
Green Island Cement Co., Ld.	1889	$4,000,000	400,000	$10	$10	$11,000	$10,804	31-12-06	Interim div. of 50 cents per share for % 1907	9	$11 buyers
Hall & Holtz, Ld.	....	$420,000	21,000	$20	$20	$186,000	$15,002	28-2-07	$2½ for year ending 28-2-07	11¼	$20 buyers
Hongkong Electric Co., Ld.	1889	$600,000	60,000	$10	$10	none	$2,953	28-2-07	$1.00 for year ending 28-2-07	7	$14¼
Hongkong Ice Co., Ld.	1881	$125,000	5,000	$25	$25	*k* $105,000	$4,361	31-12-06	Interim of $4 for half year end. June 30th 1907	9¼	$240
Hongkong Rope Manufacturing Co., Ld.	1883	$500,000	50,000	$10	$10	$65,000	$4,212	31-12-06	Interim of 80 cents per share for % 1907	8	$25 buyers.
Maatschappij tot Mijn-, Bosch- en Landbouwexploitatie in Langkat	1902	Gs. 2,500,000	25,000	Glds. 100	Glds. 100	Tls. 547,500 *i* Tls. 27,603	Tls. 10,374	31-10-05	Third interim div. of Tls. 7½ making Tls. 22½ account 1907	9	Tls. 335 sellers
Peak Tramways Co., Ld. Do. (New)	1907	$750,000	25,000 50,000	$10 $10	$10 $1	none	$2,655	30-4-07	$1 per share for period from 19th Oct. to 30th April, 1907	8½	$12 buyers $2
Philippine Co., Ld.	1904	$675,000	67,500	$10	$10	none	*Dr.* P. 34,324	31-12-05	None	....	$5 buyers
Shanghai Gas Co., Ld.	1903	Tls. 800,000	24,000	Tls. 50	Tls. 50	*d* Tls. 100,000	Tls. 7,990	31-12 06	Interim of Tls. 3½ for a/c 1907	7¾	Tls. 105 sales
Shanghai Horse Bazaar Co., Ld.	1904	Tls. 270,000	5,400	Tls. 50	Tls. 50	Tls. 67,323	Tls. 9,751	31-12-05	Tls. 4 for 1905	....	Tls. 35
Shanghai Pulp & Paper Co., Ld.	....	Tls. 450,000	4,500	Tls. 100	Tls. 100	Tls. 45,000 *e* Tls. 8,000	Tls. 3,354	31-12-06	Final of Tls. 5 making Tls. 10 for 1906	....	Tls. 67½ sales
Shanghai-Sumatra Tobacco Co., Ld.	1902	Tls. 600,000	9) 30,000	Tls. 20	Tls. 20	Tls. 24,820 *u* Tls. 50,000	Tls. 7,843	31-10-06	Interim of Tls. 5 (25%) account 1907	8½	Tls. 116 buyers
Shanghai Waterworks Co., Ld.	1881	£288,000	8,175 7,200	£20 £20	£20 £15	Tls. 190,000	Tls. 85,592	31-12-05	Interim of 15/- for % 1907 Interim of 11/-3 for % 1907	....	Tls. 310 buyers Tls. 280 buyers
South China Morning Post, Ld.	1903	$150,000	6,000	$25	$25	none	*Dr.* $41.934	28-2-06	None	....	$22
Steam Laundry Co., Ld.	1902	$100,000	20,000	$5	$5	none	478	31-5-07	40 cents for year ending 30-5-07	6¾	$6
Tientsin Waterworks Co., Ld.	1901	Tls. 200,000	2,000	Tls. 100	Tls. 100	Tls. 15,259 *e* Tls. 4,000	Tls. 201	30-4-07	Tls. 6½ for year ending 30-4-07	....	Tls. 97
Union Waterboat Co., Ltd.	1905	$500,000	15) 50,000	$10	$10	none	$349	31-12-06	First year	....	$12
United Asbestos Oriental Agency, Ld.	1896	$100,000	10,000	$10	$4	$35,000	$13,00	31-5-07	80 cts. on 9,900 ord. shares & $19.80 on 100 Founder shares for year ending 31-5-07.	8	$10
Watson (A. S.) & Co., Ld.	1886	$900,000	90,000	$10	$10	$300,000 $25,000	$5,482	31-12-06	Final of 40 cts. making 80 cts. per share for year ending 31-12-06	7¼	$11
William Powell, Ld.	1901	$150,000	15,000	$10	$10	*e* $4,500	$182	30-6-06	Final of 30 cents making 80 cents for year ending June 30th 1906	....	$7

LOANS AND DEBENTURES.	AGENTS FOR THE LOAN.	AMOUNT OF LOAN.	PAR VALUE	OUTSTANDING BONDS.	WHEN PAYABLE.	CLOSING QUOTATIONS.	
China Government, 7 per cent. Silver Loan 1886 E.	Hongkong & Shanghai Banking Corporation.	Tls. 767,200	Tls. 250	1914	Mar. 31st and Sept. 30th each year until Mar. 31st, 1917	par.	Plus accrued interest
Hongkong Hotel Company, Ltd., 6 per cent. Mortgage Debentures of 1899 ‡		$500,000	$500	§ all	Half yearly, June 30th and December 31st	par.	
Shanghai & Hongkew Wharf Company, Ltd., 6 per cent. Debentures of 1902		Tls. 543,900	Tls. 100	....	Half yearly, June 30th and December 31st	Tls. 99	
Astor House Hotel Company, Ltd., 8 per cent. Debentures of 1903		Tls. 500,000	Tls. 100	....	Half yearly, January 1st and July 1st	Tls. 105	
Chinese Engineering & Mining Co., Ltd., 6 per cent. Debentures of 1903 †	....	£500,000	¶	£431.960	Half yearly, June 30th and December 31st	par.	
International Cotton Manufacturing Co., Ltd. 7% Debentures of 1901	Russo Chinese Bank	Tls. 500,000	Tls. 100	||	Half yearly, March 31st and Sept. 30th	Tls. 97½.	
China Light and Power Co., Ltd. 6% Debentures of 1907	....	$500,000	$100	....	Half yearly, Jnne 30th and December 31st.	par.	

a Authorized capital $2,000,000.
b Building Reserve Account.
c Capital Reserve Fund.
d Depreciation Fund.
e Equalization of Dividend Fund.
f Exchange and Investment Fluctuation Account.
g Gold Reserve Fund
h Exchange Reserve Account.
i Insurance Fund.
j Reinsurance Fund.
k Contingencies Account.
l Legal Reserve Fund.
m Authorized Capital
n Sinking Fund.
o Raw Sugar Reserve Account.
p Premium on New Issue.
q Boiler Repairs and Renewals Account
r Repairs and Renewals Account.
s Silver Reserve Fund.
t Depreciation and Repairs Account
u Underwriting Suspense Account.
v Special account
w Special Works Fund.
x Extra Reserve Fund.
y 72,560 owned by the Company.
z 7,200 shares unissued.
1 5,725 shares unissued.
2 First issue of 60,000 of which 10,411 unalloted.
3 5,000 shares unissued.
4 4,480 shares unissued.
5 5,000 shares unalloted.
6 1,616 shares unalloted.
7 842 shares unissued.
8 14,000 shares unissued.
9 17,000 shares unissued.
10 40,453 shares actually issued.
11 7,688 shares actually issued.
12 4,200 shares unissued.
13 500 shares unissued.
14 198 shares unissued.
15 22,250 shares unissued.
16 10,000 shares unissued.
17 Special shares are entitled to half of the profits.
18 Capital contributed by Chinese Government-Kuping Tls. 5,000,000.
* Based on last year's dividend.
** Based on present dividend.
|| Only Tls. 134,000 taken up.
§ 216 held by the Company.
¶ In certificates of £20 and £100.
‡ Redeemable in 10 years, or at option of Company, the Company giving 6 months notice.
† Redeemable at par at rate of £10,000 per annum from 31st December 1903 to 31st December 1952.
*** Redeemable at par on 30th June, 1952.
Dr Deficit.

SINGAPORE SHARE QUOTATIONS

(COURTESY MESSRS. FRASER & CO., BROKERS, SINGAPORE, SEPTEMBER 31, 1907)

Date of Formation	Capital	Capital paid up	No of Shares Issued	Issue Value	Paid up	Reserve	Last Dividend	Name	Buyers	Sellers	Closing Quotations
								MINING			
1903	$300,000	300,000	30,000	10	10	......	25% for year ending 31-3-07	Belat Tin Mining Co., Ltd	14.25	14.50	$14.50
1907	$300,000	225,000	22,500b*	10	10	......		Bruang Ltd	8.50	8.75	8.75
1901	$600,000	600,000	60,000	10	10	......	20% for year ending 30-4-07	Bruseh Hydraulic Tin Mining Co., Ltd	14.00	15.25	14.00
1903	£400,000	350,000	350,000a	1	1	......		Duff Development Co., Ltd	2.60	2.65	2.60
1905	£30,000	30,000	30,000	1	1	......	3f- during 1906	Jeher Hydraulic Tin Mine, Ltd	---	10.00	10.00
1907	$400,000	$375,000	37,500b	10	10	......		Kanaboi, Ltd	11.50	11.75	11.50
1901	£60,000	60,000	60,000	£1	£1	......	1f interim during 1907	Kinta Tin Mines, Ltd	13.00	13.50	13.50
1906	£100,000	£90,000	90,000c	£1	£1	......		Kledang Tin Mining Co., Ltd	14.50	14.75	14.50
1905	$150,000	99.000	9,900d	10	10	6,000	25% interim for 1907	Kuantan Tin Mining Co., Ltd	17.25	18.00	17.25
1906	£120,000	£120,000	120,000	1	1	......		Lahat Mines Ltd	---	8.00	8.00
1906	£30.000	£30,000	30,000	£1	£1	......		Malaya and Siam Corporation, Ltd	£1.7.6	1.10.0	£1 10s. 0d.
1906	$450,000	$337,500	45,000	10	7.50	......		Malacca Tin Dredging Co., Ltd	---	6.50	6.50
1906	£250,000	£179,500	600,000j	5f-	4f6	......		Pahang Consolidated Co., Ltd	---	39f6	39f6 prem.
			100,000	£1	£1	......		" " " 7% Pref	---	---	nominal.
1904	£120,000	100,000	100,000e	1	1	......	4f6 interim during 1907	Pusing Lama Tin Mines, Ltd	---	20.50	20.50
1905	£27,000	21,750	21,750f	1	1	......	1j- interim during 1907	Rambutan, Ltd	---	18.00	18.00
1992	£200,000	191,250	50,000	1	1	4,873	1f- paid January 1901	Raub Aust Gold Ming Co., Ltd, *Fully. pd.*	8.75	9.00	8.75
			150,000	1	18f10	......	1f- " " "	*Contrib*	8.75	9.00	8.75
1805	£40,000	35,200	35,200g	1	1	......		Redhills Tin Mining Co., Ltd	15.50	16.00	16.00
1998	2.500,000	2,500,000	25,000	100	100	......	52½% for year ending 31-12-06	Redjang Lebong Mining Co	---	---	620.00
1800	$110,000	110,000	22,000	5	5	......	10% for 1907	Royal Johore Tin Mining Co., Ltd	2.00	2.25	2.25
1907	£80,000	£80,000	80,000	1	1	......		Sempam Tin Mines, Ltd	10.50	10.75	10.50
1906	$850,000	850,000	85,000	10	10	......	20% interim during 1907	Serendah Hydraulic Tin Ming. Co., Ltd	14.25	14.50	14.50
1899	$230,000	230,000	23,000	10	10	......	5% for ½ year ending 30-6-06	Sipiau Tin Co., Ltd	5.75	---	5.75
1907	£90,000	70,000	70,000d*	£1	£1	......		Tekka, Limited	13.00	13.50	13.00
1902	£160,000	149,185	149,185h	1	1	......	5f- interim during 1907	Tronoh Mines, Ltd	18.00	19.00	19.00
								RUBBER			
1905	£150 000	£116,625	46,500i	1	1	......	18% for year ending 31-12-06	Anglo-Malay Rub. Co., Ltd. *Fully paid*	5.17.6	£6.2.6.	£6 2s. 6d.
			93,500	1	15f-	......		" " " *Contributory*	---	---	£5. 2s. 6d.
1905	$200,000	105,000	10,500	10	10	......	12½% interim for 1907	Balgownie Rub. Estate Ltd. *Fully paid*	32.00	---	$32.00
1904	£30,000	15,125	7,000k	1	1	......		Batu Caves Rub. Co., Ltd. *Fully paid*	5.10.0	---	£5. 10s. 0d.
			11,000	1	15f-	......		" " " *Contributory*	---	---	£4. 5s. 0d.
1903	£70,000	61,000	61,000l	1	1	......	30% for year ending 31-3-07	Bukit Rajah Rubber Co., Ltd	---	£7.0.0	£6. 15s. 0d.
1906	$150,000	125,000	12,500m	10	10	......		Castlewood Rubber Co., Ltd	10.50	10.75	$10.50
1904	£12,000	10,500	6,000	1	1	......	15% for year ending 31-3-07	Cicely Rubber Estates Co., Ltd	5.10.0	---	£5. 10s. 0d.
			6,000	1	15f-	......	20% for year ending 31-3-07	" " " " 5% *Pref*	---	---	£3. 5s. 0d.
1905	£75,000	55,000	55,000n	1	1	......	10% for year ending 31-12-06	Consolidated Malay Rub. Estates, Ltd	£4.1.0	---	£4 1s. 0d.
1906	£310,000	243,227	181,454o	1	1	......	11% for year ending 31-12-07	Highlands & Lowds. Para Rub. Co., Ltd. *Fully paid*	3.15.0	3.17.6	£3 17s. 6d.
			123,546	1	10f-	......		" " " " *Contributory*	£2.0.0	---	£2 0s. 0d.
1906	£180,000	£180,000	180,000	1	1	......		Kuala Lumpur Rubber Co., Ltd	1.13.0	1.15.0	£1 13s. 0d.
1906	f.175,000	f.117,500	80	f.250	250	......		Langen Rub. and Cocoanut Co., Ltd	---	---	f.250.
			460	f.250	125	......		" " " " " "	---	---	f.125.
			160	f.250	250	......		" " " " " *Deferred*	---	---	f.250.
1906	$250,000	225,000	22,500p	10	10	......		Ledbury Rubber Co., Ltd	16.00	16.50	$16.00
1895	£50,000	28,532 5/-	10,060	1	1	......		Linggi Plantations Ltd., 7% *Pref*	---	---	——
			9,866g*	1	1	......	15% for 1906	" " " *Ordinary*	£7.5.0	---	£7 5s. 0d.
			10,134	1	12f6	......			---	---	——
			9,330	1	5f-	......			---	---	£3 0s. 0d.
1906	£300,000	260,625	115,000	1	1	......	7½% for year ending 31-12-06	Malacca Rnbber Plantations 7½% *Pref*	£1.3.6	£1.5.0	£1 3s. 6d.
			140,000	1	1	......		" " Ordinary *Fully paid*	18/6	19/-	19f-
			45,000	1	2f6	......		" " *Contributory*	---	---	nominal.
1903	£30,000	20,000	20,000q	1	1	......	40% for 1906	Pataling Rubber Estates Synd. Ltd	---	---	8. 5s. 0d.
1906	$250,000	225,000	22,500f*	10	10	......		Ragalla Rubber Co., Ltd	12.00	12.25	12.00
1904	£20,000	8.794	2,588e*	1	1	......		Sagga Company Limited	£2.5.0	2.10.0	2. 5s. 0d.
			12,412	1	10/-	......		" " "	---	---	——
1904	$100.000	100,000	1,000	100	100	......	20% for year ending 31-1-07	Sandycroft Rubber Co., Ltd	350.00	---	$350.00
1898	£30,000	28,150	263,000	2/-	2f6	......	40% for 1906	Selangor Rubber Co., Ltd	18/-	19f-	19/-
			37,000	2/-	1/-	......		" "	---	---	nominal.
1903	$250,000	250 000	2,500	100	100	......		Sing. & Johore Rub. Co., Ltd. *Fully paid*	200.00	---	$200.00
1905	$100,000	100,000	10.000	10	10	......	7½% for year ending 30/6/07	Sione Rubber Co., Ltd	16.75	17.00	$17.00
1906	£100,000	93,375	73,500	£1	£1	......		Sungei Kapar Rubber Co., Ltd	---	---	nominal.
			26,500	£1	15/				£2.1.0	---	£2 1s. 0d.
1904	£50,000	28,795	6,920r	1	1	......		Sungei Way (Selangor) Rub. Co. Ltd	---	---	£2 5s. 5d.
			35,000	1	12f-6	......		" " " *Contributory*	1.17.6	---	£1. 17s. 6d.
1904	£60,000	50,000	50,000s	1	1	......	55% for 1906	Vallambrosa Rubber Co., Ltd	9.10.0	9.12.6	£9 12s. 6d.
								GENERAL			
1894	£5,377.10.0	£4,805	7,688h*	12/6	12f6	£1,300	10% for year ending 1906	Bells Asbestos Eastern Agency, Ltd	---	---	7.00
1898	$225,000	225,000	4,500	50	50	112,500	15% & 2½% bon. for yr. end. 31-12-06.	Fraser & Neave, Ltd	150.00	---	150.00
1865	$10,000,000	10,000,000	80,000	125	125	10,000,000w 11,750,000x 250,000y	£1 15s. 0d. for ½ year ending 30/-6/07 at ex. £2 2s. 3-16d.=$16.04	Hongkong & Shanghai Bankg Corptn	---	---	670.00 ex new issue
1905	$2,400,000	2,400,000	18,000	100	----	40,000	7½% for year ending 31-10-06	Howarth Erskine, Ltd	160.00	---	190.00
			6,000	100	----	......	7% for year ending 31-10-06	" " 7% *Pref*	120.00	---	120.00
1896	$1,000,000	1,000,000	6,000	100	100	600,000	10% for year ending 31-12-06	Katz Brothers, Ltd. *Deferred*	---	---	135.00
			4,000	100	100	......	8% " " " " "	" " 8% *Cum. Pref*	---	---	nominal.
1901	$34,000	34,000	3,400	10	10	......	20% for year ending 31-10-06	Maynard & Co., Ltd	---	---	21.00
1899	$875,000	875,000	6,000	100	100	150,000	5% for year ending 31/12/06	Riley, Hargreaves & Co., Ltd	---	125.00	125.00
			2,750	100	100	......	7% for year ending 31/12/06	" " " " 7% *Pref.*	115.00	---	115.00
1903	$600,000	240,000	24,000t	10	10	......		Singapore Cold Storage Co., Ltd	---	7.00	7.00
1891	$30,000	30,000	600	50	50	20,000	10% for year ending 31-7-06	Singapore Dispensary Ltd	50.00	60.00	60.00
1884	$200,000	200,000	2,000	100	100	35,000	20% for year ending 31-12-05	Straits Ice Co., Ltd	---	140.00	140.00
1890	$500,000	500,000	5,000	100	100	400,000 241 075z	5% interim during 1907	Straits Steam Ship Co., Ltd	200.00	---	200.00
1904	$40,000	$30,280	2,535u	10	8	......		Straits Tobacco Factory, Ltd	---	5.50	5.50
			1,000	10	10	......		" " " "	---	---	nominal.
1887	$3,000,000	2,500,000	250,000v	10	10	1,050,000 1,137 084a*	10% & 5% bon. ½ yr. end. 31-3-07	Straits Trading Co., Ltd	59.00	59.50	59.50
								DEBENTURES			
								Howarth Erskine, Ltd. 6% $ 600,000	---	---	3% prem.
								Singapore Municipal 6% 400,000	---	---	20% prem.
								" " 5% 1,878,000	---	---	3% prem.
								" " 4½% 1,600,000	---	5%	5% prem.
								" " 4% 602,900	---	---	2% dis. nom
								Riley, Hargreaves & Co., Ld. 6% 225,000	---	---	3% prem.
								Tanjong Pagar. Dock Board 6% 250,000	---	---	3% prem.
								" " " 5% 1,050,000	---	---	par.

a	50,000 unissued
b	2,500 "
c	10,000 "
d	5,100 "
e	20,000 "
f	5,250 "
g	4,800 "
h	10,815 "
i	10,000 "
j	70,500 "
k	12,000 "
l	9,000 "
m	2,500 unissued.
n	20,000 "
o	5,000 "
p	2,500 "
q	10,000 "
r	8,080 "
s	10,000 "
t	36,000 "
u	465 "
v	50,000 "
w	Special Gold Reserve Fund
x	Silver Reserve Fund.
y	Insurance Fund.
z	Sundry Reserves.
*a**	Sundry Reserves.
*b**	7,500 unissued.
*c**	20,000 "
*d**	5,000 "
*e**	2,500 "
*f**	10,670 "
*g**	916 "
*h**	

YOKOHAMA SHARE QUOTATIONS

COURTESY A. C. HUTTON POTTS, SHARE AND GENERAL BROKER, YOKOHAMA, SEPTEMBER 1907

STOCKS	CAPITAL.	NO. OF SHARES	ISSUE VALUE	AMOUNT PAID UP	RESERVE FUND	AT WORKING ACCOUNT OR CARRIED FORWARD	DATE	LAST DIVIDEND	FOR TERM	CLOSING QUOTATION
Brett & Co., Ltd.	-Y- 28,000	2800	-Y- 10	-Y- 10			31-12-06	8%	for 1 year	10 Sellers.
Club Hotel, Ltd.	185,000	1850	100	100	3,000	-Y- 943.52	31-3-07	7%	for 1 year	75 Sellers.
Grand Hotel, Ltd.	500,000	5000	100	100	5,000	-Y- 23,011.87	30-6-07	6%	for ½ year	150 Sales.
Helm Bros., Ltd.	186,000	3720	50	50	22.500	-Y- 2,916.83	31-12-06	20%	for 1 year	85 Sellers.
Langfeldt & Co., Ltd.	150,000	1500	100	100		Dr. 20.304.15	31-12-06		for ½ year	45 Sellers.
C. Nickel & Co., Ltd. †	500,000	20000	25	25		1,470.97	31-10-06	16%	for 1 year	41 Nominal.
Yokohama Engine and Iron Works *	500,000	10000	50	50	50,000	-Y- 12,477.04	31-5-07	35%	for 1 year	90 Sellers.
Oriental Hotel, Ltd., Ordinary	250,000	3000	50	50	62,285.42		31-8-06	15%	for 1 year	50 Nominal.
Oriental Hotel Ltd., Preference		2000	50	50				8%	for 1 year	50 Nominal.
The Union Estate, and Investment Co., Ltd. ‡	1,000,000	10000	100	100			First Year.			105 Sales.

† 285,000 unissued.

‡ 475,000 unissued.

*-Y- 390,000 issued.

110,000 unissued.

DEBENTURE LOANS	AMOUNT OF LOAN.	FACE VALUE OF DEBENTURES.	RATE OF INTEREST.	INTEREST PAYABLE.	CLOSING QUOTATION.
Brett & Company, Limited	11,500.00	100.00	7%	1 June and 1 Dec.	85 Sales.
Yokohama United Club	250,000.00	100.00	7%	30 June and 31 Dec.	105 Sales.
C Nickel & Company, Limited	50,000.00	100.00	8%	1 May and 1 Nov.	110 Sellers.
Oriental Hotel, Limited	250,000.00	100.00	8%	1 April and 1 Oct.	100 Sellers.
Union Estate and Investment Co., Limited	250,000.00	100.00	6%	30 June and 31 Dec.	100 Sellers.

JAPANESE STOCKS.	FACE VALUE.	AMOUNT PAID UP.	DIVIDEND PER ANNUM.	DIVIDEND PAYABLE.	CLOSING QUOTATION.
Exchequer Bonds 1st issue	-Y-100	-Y-100	5%	June and Dec.	-Y- 97.60
Exchequer Bonds 2nd issue	100	100	5%	March and Sept.	,, 92.60
Exchequer Bonds 3rd issue	100	100	5%	March and Sept.	,, 92.60
Consolidated Bonds (Seiri)	100	100	5%	June and Dec.	,, 87.50
War Bonds (Gunji)	100	100	5%	June and Dec.	, 87.50
Imperial 5% Bonds (Goburi)	100	100	5%	March and Sept.	,, 85.50
Imperial Government 5% Bonds (issued 1906)	100	100	5%	June and Dec.	,, 87.50
Kobe Water Works Bonds	100	100	6%	June and Dec.	,, 97.50
Osaka Harbour Bonds	100	100	6%	June and Dec.	,, 97.50
Osaka City Public Loan Bonds	100	100	6%	June and Dec.	,, 97.50
Yokohama Water Works Bonds	100	100	6%	June and Dec.	,, 99.50
Yokohama City Public Loan Bonds	100	100	6%	March and Sept.	,, 97.50
Sanyo Railway Company Debentures (2nd issue)	100	100	6%	April and Oct.	,, 98.50
Tokyo Stock Exchange Company	50	50	40%	June and Dec.	,, 146.30
Hokkaido Colliery (Tanko) Steamship Company Limited	50	50	14%	July and Jan.	,, 105.00
Hoden Petroleum Company, Limited	50	50	36%	April and Oct.	,, 150.00
Yokohama Electric Tramway Company, Limited	50	50	7%	July and Jan.	,, 49.00
Tokyo Railway Company Limited	50	50	9%	June and Dec.	,, 69.40
Keihin Electric Railway Company, Limited	50	50	13%	June and Dec.	, 88.00
Imperial Hemp Weaving Company, Limited	50	50	13%	July and Jan.	,, 68.50
Kanegafuchi Cotton Spinning Company, Limited	50	50	22%	July and Jan.	,, 118.50
Tokyo Cotton Spinning Company, Limited	50	50	20%	July and Jan.	,, 82.50
Fuji Gassed-Yarn Company, Limited	50	50	25%	July and Jan.	,, 124.80
Nisshin Cotton Spinning Company, Limited	50	12½	—	—	,, 15.35
Fuji Paper Mill Company, Limited	50	50	10%	June and Dec.	,, 53.00
Yokohama Dock Company, Limited	50	33	15%	June and Dec.	,, 68.50
Tokyo Rope Manufacturing Company, Limited	50	50	20%	June and Dec.	,, 94.00
Nippon Sugar Refinery Co., Ltd. (Tokyo)	50	50	20%	June and Dec.	,, 104.20
Dai Nippon Beer Brewery Company, Limited	50	50	15%	July and Jan.	,, 104.45
Tokyo Gas Company, Limited	50	50	15%	July and Jan.	,, 92.30
Kirin Brewery Company, Limited	50	50	8%		,, 68.20
Tokyo Electric Light Company, Limited	50	50	10%	June and Dec.	,, 69.90
Yokohama Electric Light Company, Limited	50	50	15%	July and Jan.	,, 84.00
Osaka Electric Light Company, Limited	50	50	15%	July and Jan.	,, 119.50
Kobe Electric Light Company, Limited	50	50	14%	July and Jan.	,, 86.00

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